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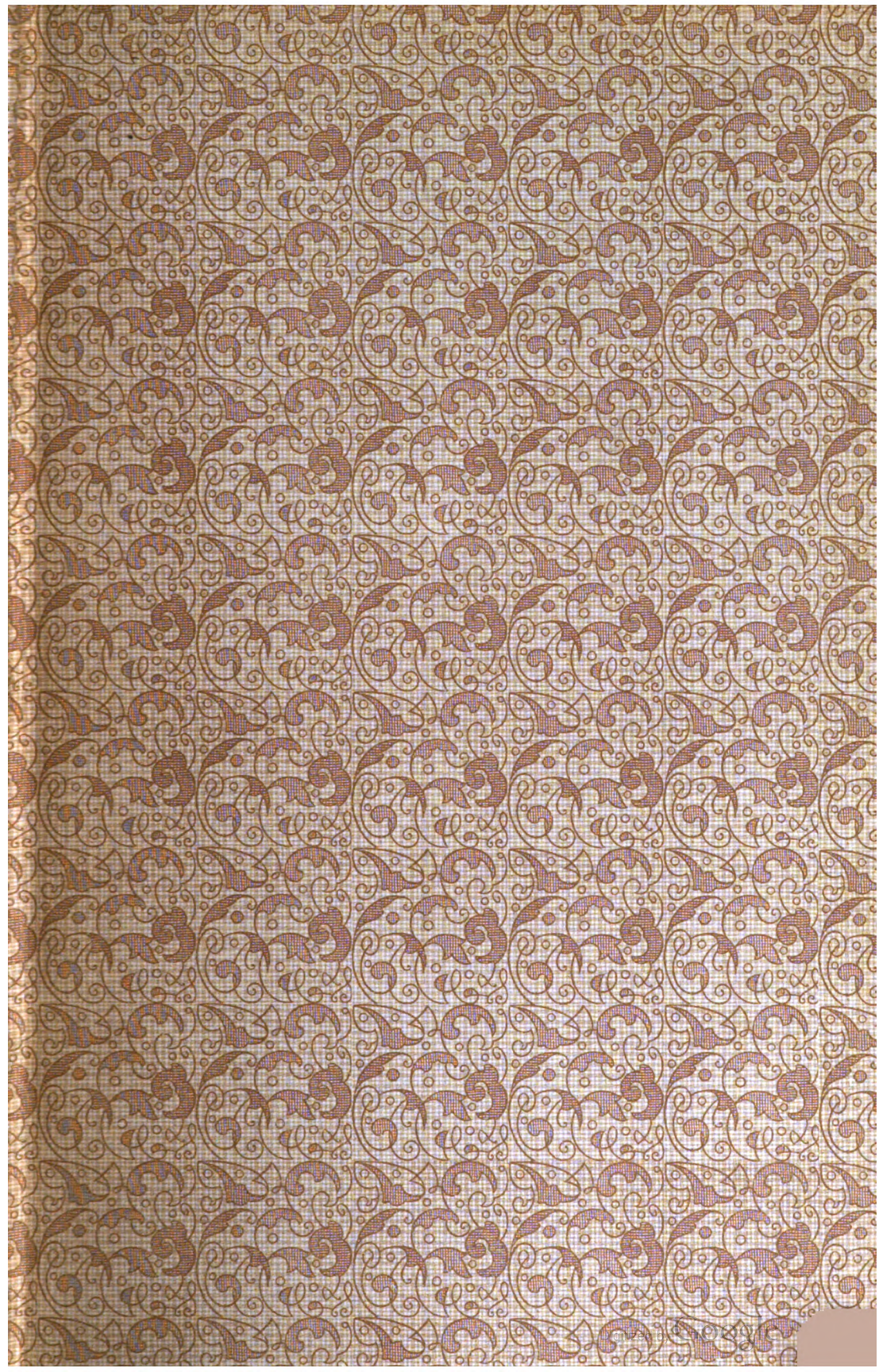
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G. HARLAN WELLS, M. D.
State Society Editor, **GILBERT J. PALEN, M. D.**

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1914

THE HAHNEMANNIAN MONTHLY.

JANUARY, 1914

JEJUNOSTOMY.*

BY

WILLIAM B. VAN LENNEP, A. M., M. D., F. A. C. S., PHILADELPHIA.

IN thinking over the work to be done by this newly organized society which is largely made up of surgeons working in the parent and associated hospitals, it has seemed to me that it should be along somewhat the following lines: short, clinical papers which would bring out live discussions, the presentation of cases for demonstration and advice and of the results of original research and experimentation.

Our secretary has misunderstood the title of my paper this evening, for although it has for its foundation "an experience with jejunostomy," its object is rather to define the sphere of this operation and to make a plea for its more frequent performance in connection with diseases of the stomach.

The case to be narrated is not an unusual one, a number having been reported and many more having, no doubt, been operated by the members of this society.

R. E. B., 42 years old, of medium height, was admitted to the Hahnemann Hospital, January 8, 1913, and operated the next day. He was prepared by the usual enema, scrub and hot bath, the day before operation, mouth sterilization with weak carbolic solution and the application of benzine and bichloride alcohol in the operating room.

The following is an abstract of the history, as taken by his physician, Dr. H. M. Eberhard, on January 3d:

*Read at the first meeting of the Society of Surgery, Gynecology and Obstetrics of the Philadelphia County Homœopathic Medical Society.

Family and personal history, negative; has two healthy children. Present illness began fourteen months ago, with anorexia, gradual loss of weight, belching of large quantities of gas and distress from weight and fulness in the epigastrium from one to three hours after meals.

Present symptoms: persistent nausea with vomiting, two or three times daily, of food taken at previous meals, or the day before. Pain in the epigastrium one half to one hour after eating, which is not relieved by taking more food or bicarbonate of soda, patient having a particular aversion to meats; with this is persistent pain to the left of the twelfth dorsal vertebra.

Objective symptoms: a large, hard, irregular, movable mass in the epigastrium, extending slightly more to the right side. Patient intensely cachectic and extremely emaciated, having lost over forty pounds since the beginning of his illness.

Gastric analysis: fasting stomach contains five hundred c.c. of a black, thick fluid and twelve currants given twelve hours before. Analysis of this fluid shows a total absence of hydrochloric acid, pepsin and rennet and the presence of occult blood and lactic acid, the former being also present in the fæces. Ewald's test breakfast corroborated this, there being no free hydrochloric acid and a total acidity of 10; Soloman's, tryptophan and glycyl-tryptophan tests and Boas-Oppler bacilli are negative. Examination of the blood gives hæmoglobin, seventy-two; red cells, 3,600,000; white cells, 10,000, and by the differential count, an excess of eosinophiles. The heart, lungs and kidneys are normal.

Diagnosis: gastric cancer. Treatment: exploration.

Notes of the operation as taken from my record: Vertical incision to the right of and close to the median line. Patient bled very freely and the blood was thin and watery. Hard, nodular tumor, involving practically the whole stomach, but freely movable and unattached, there being no tissue available for a gastro-enterostomy. The growth extended into the cardiac end, with probable dilatation of the œsophagus. Transverse colon turned up and protected with towel; uppermost jejunum drawn out and nicked on free edge, opposite mesentery, about fifteen inches below the duodenal junction, or at a point where it could be delivered without any tension. Nélaton catheter (No. 17 Charrière) pushed in, down stream, for about three inches and fixed by a slowly absorbing, catgut suture (twenty-day chromic). About two inches of the protruding

catheter was then infolded by the jejunal wall with a continuous button-hole suture of fine Pagenstecher thread (after Witzel's method of gastrostomy) and the line of suture fastened to the peritoneum, at the lower angle of the wound, while closing this with a running suture of the same material. Continuous suture, layer by layer, of the abdominal wound with chromic catgut, Michel skin clips, sterile gauze, adhesive.

After treatment: Fowler position, continuous, nutritive proctoclysis by the method devised by Dr. Eberhard, morphia as needed and cracked ice sparingly in the absence of vomiting. Patient collapsed after operation and required energetic stimulation, but at the end of twenty-four hours his temperature was normal and kept so. The kidneys responded promptly and he vomited but twice during the first forty-eight hours. At the end of the second day liquid feeding was begun through the tube; this was well taken and rapidly increased. Forced feeding, both here and per rectum, was necessary on account of his miserable condition. On the fifth day the tube worked out and was cleaned and replaced, the same being repeated as often as necessary thereafter. To satisfy his longing for food by the mouth, he was allowed to chew whatever he desired and then spit it out, and his especial longing appeared to be for rare beefsteak. Strange to say, it was not long before he could swallow this beef juice and other fluids in moderation, without nausea or regurgitation. Wound healing and recovery were uneventful and he left the hospital for his home on February 18th (fortieth day) very much improved in every respect. From this time on, until his death, early in October, about ten months later, he gained some twenty pounds in weight and was not only about the house, but out and about town. Death was probably due to extension to the diaphragm, for I understand it was preceded by uncontrollable hiccough.

In this case jejunostomy was the only resource and gave the stomach such perfect rest and relaxation, that, with the probable breaking down of the ulcerating growth, fluids were enabled to pass through. In my experience, this operation seems far preferable to posterior gastro-enterostomy in malignant cases, I say posterior, because the anterior operations, whether by the method of Roux or by a loop with entero-enterostomy, have been highly unsatisfactory. The cases which give sufficient healthy tissue for an anastomosis between the stomach and intestine, usually permit of a gastrectomy, while, in the

more extensive growths, the condition of the patient is such as to make a quicker and simpler operation desirable. Bile and pancreatic fluid have a free exit, the food goes into a portion of healthy intestine, where it is readily assimilated and therefore feeding can be forced and the patient built up. With a good technique leakage need not be feared and the attachment of the intestine to the abdominal wall appears to cause no trouble, even though the case be one in which the fistula can be subsequently dispensed with, which is not the case with gastrostomy where the attachment interferes more or less with motility. Should the tube come out, it must be replaced within a few hours, as the opening shows a strong tendency to close. Best of all, a diseased stomach is eliminated from digestion and set perfectly at rest.

The advantages of jejunostomy are not confined to advanced and inoperable malignant cases. Just as it is indicated where the growth is so extensive as to give insufficient tissue for the performance of a gastro-enterostomy, so it is in multiple or extensive, benign ulcerations which can not be excised and it is to be preferred, because it not only gives absolute rest, but does away with feeding through a diseased organ. Furthermore, it would seem that jejunostomy will cure gastric ulcers, *in the absence of obstruction*, a condition which usually results in prompt healing of the gastro-jejunal anastomosis without relief. The ability to nourish through healthy structures and to do so indefinitely gives jejunostomy a great advantage over both gastro-enterostomy and rectal alimentation. Even in œsophageal and cardiac obstructions, there are those who advocate the jejunal over the gastric route and those who use it as a preliminary to build up a patient for a severe stomach operation or to allow an extensively operated stomach to regain its functions; to this may be added a stomach so "scarred" that it can not do its work. Again, just as the "splinting" in ulceration is accompanied by jejunostomy when gastro-enterostomy is hard to carry out, so it is indicated, under similar conditions, in gastric or duodenal hæmorrhages.

In a very interesting lecture, some time since, Mayo-Robson called attention to the occurrence of gastro-jejunal and jejunal ulcerations after gastro-enterostomy (*British Medical Journal*, January 6, 1912). The former he ascribes to faulty technique and states that they call for excision and a new anastomosis or

a jejunostomy to induce rest and healing; the latter he believes to be similar to the duodenal ulcer, produced by the projection of hyperacid gastric contents through the gastro-jejunal opening, instead of the pylorus, a jejunostomy being the diverting and curative remedy. Finally, jejunostomy has been recommended for the relief of excessive and persistent hyperchlorhydria alone; for recurring hæmatemesis which will not yield to ordinary treatment and in which exploration reveals no removable cause and even in persistent, dangerous vomiting, such as is met with occasionally in pregnancy.

As to the technique, I have used the Witzel principle, as described above, in all my cases (Mayo-Robson, I believe, uses the Kader gastrostomy method). I have also made a rather long attachment of the loop to the parietal peritoneum, to avoid kinking and subsequent obstruction by a band, but some operators fasten the gut with but one or two sutures. I have been especially impressed with the simplicity and rapidity of the operation, even the worst cases standing it well. The functional results have been so satisfactory, that I have seen no cause to use the more complicated methods of Maydl, on the Roux principle, or that practiced by Mayo-Robson, in which he attaches the fistula to the skin and then makes a short circuit below, the object of both methods being to side-track bile, pancreatic juice, etc., and avoid skin irritation. I have never observed the slightest sign of this in my cases.

Far be it from me to belittle the value of such operations as gastrostomy and particularly of gastro-enterostomy, but brilliant as are the results obtained from the latter especially, a considerable experience has taught me that we must recognize their limitations and that jejunostomy must at times come to their aid. If, therefore, the sphere of this operation in your work is extended beyond the "forlorn hope," *ante-mortem* place it has so generally occupied, the object of this paper will be more than accomplished.

DISCUSSION.

DR. EBERHARD: First, let me commend Dr. Van Lennep's excellent paper. I think for a long time the question of jejunostomy has been neglected, and this paper, no doubt, will be an impetus towards bringing forward more operations of this type. Jejunostomy, no doubt, is going to become a popular operation, when the use for it is more thoroughly understood. I

have often seen cases in which the surgeon has opened the abdomen, and after taking a peep inside, has said, "This is a cancer of the stomach," has closed the abdomen, and let the patient die. Frequently, these cases are not true cancers, but are indurated ulcers which involve half the stomach. Here, if jejunostomy were done, the induration might subside, and the patient gradually return to normal health. One of the most important factors to be considered in jejunostomy is the after treatment. Some time ago I saw a case in consultation with a surgeon who said, "Here I have a large indurated ulcer in which I thought I could do a gastro-enterostomy, but after opening the abdomen, I found the induration was so large that I could not do so, so instead did a jejunostomy. In spite of all my work, my patient is getting worse." I asked what he was feeding his patient, and he replied, "Beef juice, milk and liquids of all kinds." From this I calculated the number of calories his patient was given in twenty-four hours, and found the total was exactly six hundred. The patient was a man of about one hundred and fifty pounds when at normal weight. He was a driver for a large concern and performed very laborious work. Normally, this man ate between 3,500 and 4,000 calories while at work and in good health, and at least should have had 2,500 while resting. I prescribed for this man a diet of liquids and semi-liquids which totaled 5,000 calories, and he promptly improved. If a surgeon will consider the caloric value of the simple foods in doing jejunostomy, he will be gratified by the results obtained. When one considers that an egg contains seventy calories, a pint of milk, three hundred and twenty calories, and a quarter pound of butter, two hundred and twenty calories, you can see that it would take but a short time to place the patient on a diet which would be nourishing, and thus avoid almost starvation. These indurated ulcers, and stomachs which are cancerous, after jejunostomy require a great amount of nutriment to make them regain their natural strength. If possible add more fuel to make the patient gain weight.

Another conclusion to which I have come, is that after jejunostomy, patients frequently develop intestinal cramps or pain throughout the intestinal canal due to overfeeding of milk. In these cases, give a mild purge through the tube into the jejunum, whenever the patient has a sign of distress.

Let me again compliment Dr. Van Lennep on his most valuable paper.

DR. NORTHROP: Dr. Van Lennep tells us to-night what we have been told off and on by prominent surgeons the world over, namely, that there is some dissatisfaction with gastro-enteros-

tomy. We are unsettled. The results are not all that we wished and looked for and we are therefore trying to find something else to take the place of even the posterior gastro-enterostomy. Up to the present time the surgical world looks upon jejunostomy as the operation that is advisable and necessary principally where the stomach, as far as adequate work is concerned, is a thing of the past. Where there is an indurated ulcer, or a cancer, or whatever may be the lesion involving the organ, the stomach cannot work and therefore the operation of jejunostomy is resorted to as one of necessity and usually one of great necessity. It is one easily performed,—a simple operation, and it tides the patient over and prolongs life and overcomes and does away with a great many very distressing symptoms. But to do this operation for the conditions which have been suggested to-night is going further than I personally have gone so far, and yet I can see why it should be done for these conditions. I think the grounds taken by Dr. Van Lennep are very sane and sensible. I have had experience with only one jejunostomy, but that was a very successful one and I would be glad to do the operation again under similar circumstances or any other conditions that promised a favorable result. Two years ago I did a subtotal gastrectomy in a case of linitis, or cirrhosis of the stomach, at the same time anastomosing the cardiac end of the stomach and the jejunum. The distal two thirds of the stomach were involved in this process. The stomach was not a “leather-bottle” stomach, but much worse than that. The disease, even to the naked eye, was cirrhosis, plain and simple. The microscope proved it. Specimens were examined in our own laboratories here and specimens were sent to Dr. Bloodgood, of Baltimore, and all agreed that the disease was not malignant. The patient ultimately died, a year and a half later, and so did another patient with the same disease in whom I performed a posterior gastro-jejunostomy. The patient in whom I did the jejunostomy lived comfortably for a year and a half. When I say nicely and comfortably I mean a great deal. He was a frequenter of Dooner’s Hotel and was accustomed to the best that Dooner sets forth. What little he had left of his stomach along with the posterior gastro-jejunostomy enabled him to be very comfortable. Finally he lost weight and vomited food which he took even in small quantities. It would be regurgitated after 12 to 16 hours and he became very much emaciated and finally went to bed. I then did a jejunostomy after the Mayo-Robson method, short circuiting the jejunum by the use of a decalcified bone button which worked very well indeed. The jejunostomy gave us an opportunity to feed him through a No. 12 catheter and he improved

nicely and regained considerable strength and was made quite comfortable for three or four months, when he died. After his jejunostomy he was not satisfied with his feeding through the catheter, he could not taste his food and he was a man who wanted to taste his food and drink, and therefore we allowed him to have food by the mouth, though he vomited it several hours after. There was no excoriation of the skin in this case, no irritation of the skin about the jejunostomy opening.

DR. J. D. ELLIOTT: While I have not had a great deal of experience with this operation, I believe that when properly used there is a future for it. It can be used to sidetrack the food, not only in chronic ulcers without obstruction, but in certain such ulcers with obstruction in which fresh adhesions preclude the performing of a gastro-enterostomy. After the acute inflammatory exudate has been absorbed a permanent gastro-enterostomy, with or without excision of the ulcer, may be made.

Again, in inoperable carcinoma of the stomach a jejunostomy may be preferable to a gastro-enterostomy to discontinue the irritating flow of food over the ulcer and thus prevent the further breaking down of tissue. That absorption of broken down material has much to do with the cachexia of gastro-intestinal cancers has been shown by a number of our permanent colostomies for carcinoma of the rectum; in one case which was operated over two years ago the patient is to-day in fair health, yet when he entered the hospital life was hardly worth living. Before he had left the hospital he had gained twenty-five or thirty pounds and had functional control of his artificial anus. But the greatest change was noticeable in his mental state, which had changed from one of great depression and hopelessness to one of resignation but contentment with his fate. As nothing had been done for the tumor the improvement could only have been brought about by the lessening of the absorption of toxic material from the ulcer and its accompanying colitis.

It has been pointed out that the same result can be obtained by a posterior gastro-enterostomy and this is no doubt the operation of choice, but when such an opening is impossible or is likely to be later involved in the carcinomatous process, I believe a jejunostomy may be used successfully.

PRESIDENT: What is the consensus of opinion as to extension of the use of the operation of jejunostomy? It seems to me that is a very good point to discuss.

DR. THOMPSON: It seems very advisable from my viewpoint. It gives relief from the vicious circle of the bile and pancreatic fluid coming down and going back into the stomach

again, causing increase of stomach irritation. Doing jejunostomy alone would get rid of that one bad complication following a gastro-enterostomy.

DR. LEOPOLD: It seems to me that we have lost a number of golden opportunities to help our patients in which we find advanced carcinoma of the stomach and while I have had no experience with this operation of jejunostomy I can see that it certainly would be of great advantage in a number of gastric and duodenal ulcers. It is such a simple and easily performed operation that it is surprising that it has been neglected for so many years. It has been a revelation to me and I shall profit by it.

DR. ROMAN: In this most instructive and interesting suggestion we see undoubtedly, as the essayist points out, the operation of the surgical principle of side tracking the diseased area and this plan of feeding by jejunostomy offers an encouragement for future surgical work, not only as a palliative measure, but as a rational plan to obtain a possible cure. We can not deny the fact that posterior gastroenterostomy will continue to be the operation of choice, under certain conditions, in gastroduodenal lesions; and this happy suggestion from our eminent essayist seems to me should be tested to further limits, not only as a means of relief to the victims of inoperable malignancy, but also in that type of cases in which gastroenterostomy is indicated, such as duodenal ulcer, in which side tracking, by jejunal fistula and jejunal feeding, will rest the seat of the lesion and lead to permanent healing, as in the manner in which we have made use of Hunter McGuire's suprapubic drain for rest of the vesical outlet. My own personal experience with jejunal fistula, has been in desperate types of cases; in two I was obliged to choose the Maydl method for fistula in the jejunum by reason of extensive malignant involvement of the gastroduodenal omentum, precluding the performance of either a Von Hacker's posterior or a Woelfler's anterior gastroenterostomy. In these cases although feeding was carefully conducted, the patients succumbed from the progressive asthenia of malignancy, in from one to two weeks.

DR. VAN LENNEP: Mr. President and Gentlemen: I do not know that there is very much more for me to say. I wish you to distinctly understand that I am an ardent advocate of gastroenterostomy, but I have learned that it has its limitations. My object in bringing the subject before you to-night was to get your ideas regarding the increased sphere we could give to this operation of jejunostomy. In cases of obstructive disease of the stomach, when we have food retention, gastro-enterostomy is the ideal operation; in the absence of obstruction, it is a

question whether the anastomosis will not heal without giving relief. A jejunostomy is not curative in any sense of the term, but it puts the stomach at rest and is indicated in patients who are in very bad shape and in those where we can not get enough healthy tissue from the stomach to do a gastro-enterostomy. Even if the temporary relief afforded the stomach by a jejunostomy may necessitate a second, curative operation, we have the assurance that the jejunal fistula will heal very rapidly. Again, in malignant cases, when an ideal operation can not be done, I think is far superior to the gastro-jejunal anastomosis, especially of the anterior variety, which is so often our only recourse. I am glad Dr. Eberhard has mentioned the question of after-treatment and we have had a considerable experience together along those lines. Mayo-Robson lays particular stress on the fact that the patient is not cured when the operation is done, and as a matter of fact our curative treatment has only just begun. The internist should co-operate with the surgeon, along the lines of properly selected diet and I would urge all of you, after any of these stomach operations, to remember the remarks of Dr. Eberhard in regard to nutrition. I am very much obliged to you, gentlemen, for your kind consideration.

May I venture to offer a suggestion in regard to the work of this Society? That is, not have one paper, but half a dozen. I think we should have a diversity of subjects among men who represent so many branches of surgery. I hope that at the next meeting your committee will give us papers on surgical, obstetrical and gynecological subjects at least.

PRESIDENT: We trust the papers will be so numerous that there will be a scramble to get on the program. I thought it was only fitting that the initial meeting should be presided over by a man of Dr. Van Lennep's attainments and standing in our school and I think you will all agree with me in making our choice.

DIAGNOSIS AND TREATMENT OF INTUSSUSCEPTION. Ladd says that the mother's story of a baby who has been well and suddenly taken with an attack of abdominal pain associated with drawing up of the legs and followed by vomiting, is sufficient reason for making a thorough abdominal examination even if the baby looks well. At this period before any distention has taken place, a small mass or sense of resistance may be felt at any place along the course of the colon, but in this early stage is most likely to be felt at the caecum or between there and the middle of the transverse colon. The next sign which presents itself is the appearance of blood in the stools. The presence of blood without much feces, and without mucus and the frequent movements characteristic of infectious diarrhoea, is practically pathognomonic of intussusception.—*Abst. A. Jr. Obs.* Vol. 68, 188.

**REPORT OF A CASE OF PAPILLARY CYSTADENOMA OF THE OVARY
COMPLICATING PREGNANCY.**

BY

FLORENCE N. WARD, M. D., SAN FRANCISCO, CAL.

THE patient whose history follows was referred to me by her physician, Dr. Hannah Goodrich. She gave the following history: Mrs. N. A. E., age 26, nulliparous, American, married eight months, tall, slender, pale woman. Hereditary history: Mother and aunt died of cancer; father cirrhosis of liver. Menstrual history: Puberty at 15, menses always irregular, from two weeks to a few days between periods, profuse flow, severe crampy pains first day, with backache. She had never been robust, the year before marriage had abdominal symptoms diagnosed as pelvic tuberculosis; had always had weak digestion and poor appetite. She reported to me December 21, 1912, complaining of left ovarian pain. Her last menstruation had been August 30, 1912. Examination showed a well developed pregnant uterus rising midway to the umbilicus, evidently of four months' duration; on the left side on a level with the fundus of the uterus was found a tumor freely movable, separate from the uterus and about the size of a large orange.

The patient was kept under observation; her pains gradually grew more severe and the tumor increased in size so that it was considered advisable to undertake surgical measures for her relief.

The blood count was as follows: Hæmoglobin 80 per cent., red blood cells 4,240,000, leucocytosis 11,000.

Operation.—On January 29, 1913, I removed the tumor, Dr. Botsford administering the anæsthetic, Dr. Boldemann assisting. On making the incision to the left of the umbilicus, a normal five months' pregnant uterus was encountered, with a multilocular tumor of the ovary, springing from the left broad ligament, freely movable and without adhesions. It was carefully delivered from the abdomen with as little trauma to the pregnant uterus as possible. After it was delivered, it was found that a rupture had occurred at the inner and superior aspect of the tumor where the wall was very thin, permitting quite a quantity of colloid material to escape into the abdomen. The pedicle was ligated and the tumor removed. The raw surface

of the pedicle was turned in and the usual abdominal closure was made. The left tube was found greatly engorged but no adhesions. The rest of the abdominal contents presented no pathological features as far as could be determined as great care was exercised to inflict as little trauma upon the peritoneal surfaces as possible. The greater curvature of the stomach rested on the fundus of the uterus.

The patient made a rapid recovery from the operation, her pregnancy progressing normally until May 29, when she was delivered of a normal seven and a half-pound girl, both labor and puerperium progressing normally, and up to the present time, the patient has shown no evidence of return of the tumor.



FIG. I. CROSS SECTION OF THE TUMOR.

Pathological Report.—Tumor of ovary. Weight 230 gms. Size of small melon. Deep red in color with a rupture at inner and superior aspect where wall is very thin. Tumor very vascular, with network of distended blood vessels over exterior, at lower pole there are masses of small cysts containing thick whitish fluid with a multitude of friable cauliflower-like growths projecting into the interior. The main portion of the tumor consists of a large cyst, its interior studded with papilliferous outgrowths. Thickness of cyst wall varies, but inner mass is very friable and spots in the wall as thin as paper.

See Figure I. showing a cross section of the tumor.

The microscopical appearance of the growths is well shown in the two photomicrographs, figures II. and III. illustrating

the characteristic papillary outgrowths both on the interior and the exterior of the tumor.

This tumor is a type of a most interesting group of neoplasms of the ovary, that is, the papillomata, that most peculiar class of tumors occupying a place midway between the benign and malignant growths, as Kelly calls them "semi-malignant" and it is that very indefinite character about them that consti-

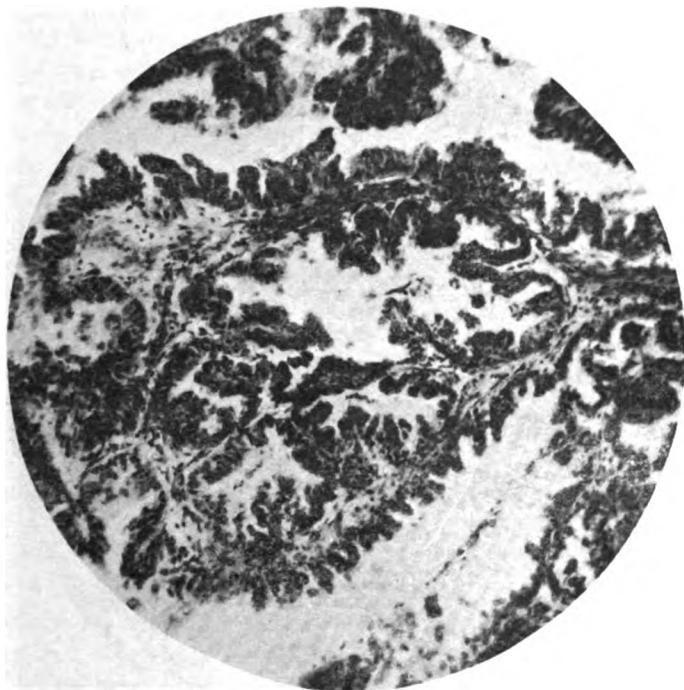


FIG. II. PAPILLARY CYSTADENOMA OF THE LEFT OVARY.
Section showing higher power appearance of the inside of the tumor.

tutes their chief menace. They belong to the tumors that develop from the epithelial structures of the ovary and stand between benign cystadenoma, the most frequent of all ovarian growths, and the carcinoma, the most infrequent. The proportion of papillomata in relation with all ovarian growths according to Kelly is about 11 per cent., and according to Pfannenstiel 15 per cent. They develop most frequently through the child-bearing period; their life history is most irregular, some cases develop with remarkable rapidity and others very slowly, increasing gradually for many years, before the patient finally

succumbs as the result of the exhaustion and emaciation that attend their growth.

Their method of invasion is peculiar to themselves, not by metastasis, as in carcinoma, but by extension, fresh foci developing upon surrounding areas of the peritoneum until signs of pressure and obstruction occur and in late cases, the pelvis and abdomen becoming so blocked by the papillomatous masses that it is impossible to remove them. Cases are on record where, when the original papillomatous tumor has been removed, that

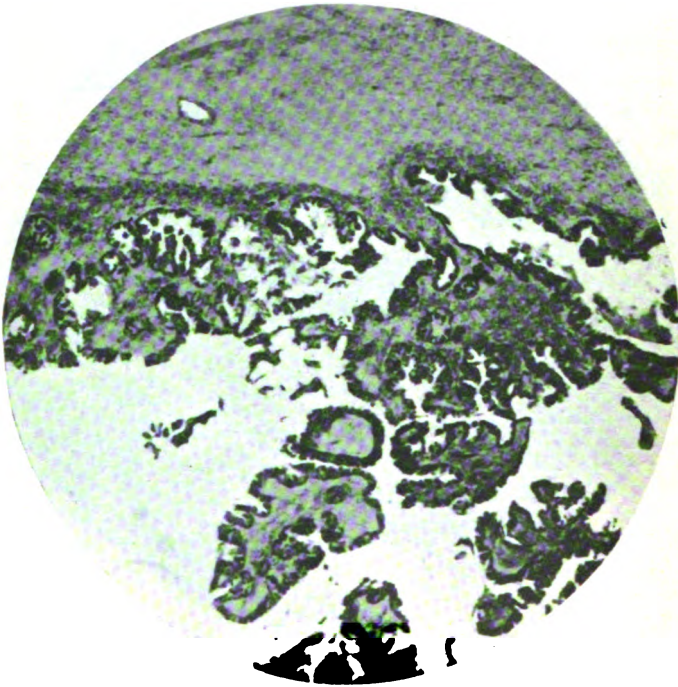


FIG. III. PAPILLARY CYSTADENOMA OF THE LEFT OVARY.

Low power showing edge of the tumor wall—with papillary outgrowths on the peritoneal surface of the tumor.

the implanted papillomatous masses have spontaneously disappeared later. In a given case, it is impossible to prognosticate if there will be further extension of the growth even after its removal. Necessarily the earlier the growth is removed before extensive implantations have taken place, the better the prognosis.

Unfortunately in the great majority of cases, there is no way of distinguishing before operation, an ovarian papilloma from

other growths of the ovary, particularly if the papillary outgrowths are within the cysts and not upon the surface. Clinical observation showed in Pfannensteil's cases that two thirds of his cases had the papillomatous outgrowths entirely within the cyst.

These clinical findings make all the more imperative the necessity of early removal of all ovarian cysts as soon as discovered. The apparently simple freely movable benign ovarian cyst may be papillomatous, therefore malignant, and the only hope for the patient lies in its early removal.

When an ovarian papilloma is complicated by a pregnancy all the more imperative become the indications for its removal. Not only is it a foreign body in the abdominal cavity subject to trauma and all the circulatory changes incident to the enlargement of the uterus during pregnancy but also to possible injury during labor and the involution changes during the puerperium. It is also subject to changes that may take place within itself. Clinical observation has established the fact that malignant degeneration occurs more frequently in these growths during pregnancy than at other periods. Torsion of the pedicle also occurs more frequently as well as cyst rupture. These accidents as well as the peritonitis that is apt to follow their occurrence all point to the necessity of their early removal in pregnancy even more so than in the non-pregnant state, particularly as statistics show no higher mortality rate for their removal then than when the patient is not pregnant.

In Conclusion.—Early surgical radical measures should be instituted in all papillomata of the ovary complicating pregnancy, for several most vital reasons.

1. The marked tendency of the growth to increase in size and during pregnancy the liability of fresh implantations upon the surrounding peritoneal surfaces.
2. The possibility of some of the accidents occurring to the cyst itself, such as rupture, or torsion of its pedicle.
3. The grave danger of the tumor complicating labor by interfering with the normal mechanism or by blocking the birth canal.
4. And, finally, statistics show that the operation is attended with no higher mortality during pregnancy than at other periods.

**IMPORTANCE OF MENTAL AND NERVOUS SYMPTOMS IN SELECTING
THE REMEDY.—ILLUSTRATED IN TREATMENT OF
TYPICAL TYPHOID CASES.**

BY

W. J. HAWKES, M. D., LOS ANGELES, CAL.

IN perhaps no other class of cases is the great wisdom of Hahnemann's rule that "the most valuable symptoms are the peculiar and uncommon," better illustrated than in typhoid fever, and other severe ailments characterized by high fever and delirium. And these "peculiar and uncommon" symptoms spring from the individuality of the patient. They are in no sense pathognomonic. The pathognomonic symptoms of typhoid fever or any other disease are practically the same in all cases. Hence they are of comparatively little use as guides in selecting the remedy for a given case.

To be sure the "typhoid state" calls to mind a certain group of medicines which have in their symptomatology the evidences of the derangement of the mental facilities which give to "typhoid" fever its name. "Typhoid" literally means "like typhus," and "typhus" means "smoky" or "cloudy;" and in this connection means a "cloudy" or "smoky" condition of the mind.

"Typhoid" symptoms are present in complaints other than typhoid fever when delirium obtains, as, for instance, pneumonia; and in such instances the so-called typhoid remedies may be as useful as in typhoid fever proper.

The chief point to be always kept prominently before the mind is, that it is the "peculiar and uncommon" symptoms which belong to the individuality of that particular patient, rather than the pathognomonic symptoms which belong to the disease, upon which we must place our chief dependence when selecting the remedy.

I have selected the following cases to illustrate my meaning, because of their clear-cut nature, and the prompt and beautiful action of the remedies so clearly indicated:

Case No. 1.—Miss P., aged thirteen and one-half years, a strong, big girl, with unusual muscular development. She had not yet menstruated, nor was there much indication of sexual development. I saw her first on June 28, 1913. Another physician had seen her several times before I was called.

The parents had in their home in the East been accustomed to good homoeopathic treatment, and did not like the appearance of the colored mixtures in two glasses which had been prescribed. Neither did I! But I didn't say so to the parents.

The history of the case was that which we so often hear—over-study and anxiety over lessons and examinations, and “standing” at the close of the school year—the abominable combination which ruins the health of so many young girls. At the most critical period of their lives, between the ages of 12 and 18, when they are changing from childhood to womanhood, when their nervous systems are in the most sensitive condition, and when their derangement may mean lifelong invalidism, they are over-worked, harassed and worried by the wickedly unwise tasks, rules and customs of school and college life of the present day.

I found her temperature the morning of the 28th, 102.5. There had been persistent diarrhoea from the first, which still continued, delirium and disturbing dreams. It has been my experience that the character of the dreams and delirium are of the utmost importance in selecting the remedy in typhoid cases. In this instance they were “of the affairs of the day.” She talked during her waking delirium of her school work, of her books and lessons, and in her dreams she was evidently distressed about lessons and problems. She was very thirsty, with dry lips and mouth.

Now with such a picture as that we may be perfectly sure that *Bryonia* will improve the patient's condition. In addition to these symptoms she resisted being moved—wanted to be quiet.

I gave her bryonia, and in 48 hours the delirium had ceased, and the diarrhoea also. The temperature at my second visit in the evening of the 28th was 103.2.

On the morning of the next day the temperature was 103°, and in the evening 104°. The remedy was not changed.

Next morning the temperature was 103.2, and in the evening 104.5, and she seemed more restless.

Next morning temperature same as previous day, and I found her more restless, with decided change in delirium. She now complained that there was another and disagreeable person in her bed, and she was much annoyed on that ac-

count. She answered questions readily, but a little slowly. She said her dreams had been of this intruder who *pulled her arms and legs*. Her breath was offensive, and her face deep red. In short, *Baptisia*, one of the most reliable remedies when indicated by its "peculiar and uncommon" symptoms in typhoid conditions, was clearly indicated.

To be sure, the symptoms, "limbs scattered about the bed," as given in the books, was not given literally; but I have found that it is not necessary that the patient use those exact words. The same mental disturbance may be indicated by the delusion of several persons being in bed with the patient, or of her being double, or of there being two or more of herself; and they all indicate *Baptisia*. Consequently the administration of that remedy promptly was followed by marked improvement generally, and complete dissipation of the delusion and distressed dreams.

I remember the case of a young girl about the age of this patient, coming down with typhoid, in which the same remedy was called to my mind in this way : I had been visiting her several days without being satisfied that I had found the right remedy, when at one visit I observed her pushing her head with a worried and earnest expression, up against the headboard of the bed. When I asked her why she did that, she said her "neck was stretched so that her head seemed a foot away from her body." Here was a peculiar and different expression of the same symptom—"limbs scattered about and worrying to get them together."

In that case the results following the administration of *baptisia* were little short of marvellous. The attack was practically aborted.

To return to the case under discussion:

About the eighth day the delirium changed again; sordes covered the teeth, and the patient more restless. I have seldom seen the *Belladonna* delirium develop so clearly, if at all, so late in a typhoid patient; but it was unmistakably the delirium of that remedy which now prevailed; patient nervous and excited, eyes bright and shining, with a frightened look. She insisted on getting out of bed, and was angry and impatient when restrained. She acted as if she wanted to run away from some one she was afraid of. *Belladonna* acted as promptly as had the other remedies, quieted the patient and banished her fears. The temperature had re-

maintained about the same during the week, 103.2 in the morning, and 104 in the evening. The highest temperature observed was 104.5.

Three days after belladonna had been administered the delirium again changed to that typical of *Hyosciamus*. She began to talk foolishly, and to throw the covers off without regard to exposure, or who was present. Kicking her feet and legs up and throwing the covers off seemed to amuse her immensely, and she would laugh foolishly.

As with the other remedies, so with hyosciamus—the relief and improvement and dissipation of the mental derangement were most prompt and unmistakable.

I think I have never experienced a more delightful and satisfactory illustration of the prompt action of clearly indicated remedies in a serious illness. And the feeling of personal elation and professional pride which I felt were worth a whole lot to me. Such results and such gratification do not follow doubtful or haphazard prescribing.

I visited this patient during two weeks, at the end of which time she was free from fever. Reports were brought me frequently during the next week. I ceased visiting her sooner than I would otherwise have done, because their home was in a suburban town ten miles away, and I wanted to save them financially as much as I could.

I have never seen a more perfect recovery from a severe attack of typhoid.

During the two weeks of my attendance she had no food of any kind, except a little pineapple juice and plenty of boiled water, hot or cold, as she preferred. My instructions were that if she insistently asked for any simple, wholesome article of food, to give her a little, but she seldom asked for any, and when offered anything she did ask for she invariably merely tasted it or refused it without tasting.

I am firmly convinced—nay, am absolutely sure—that this is the best course to pursue in *all* cases of fever of any kind. Until the tongue clears, the fever ceases and the patient asks for some simple, wholesome article of food, it is criminal folly to force or coax or bribe him to eat. Pure water or the fruit juices only should be allowed. Nor do allowable liquids include milk. My opinion is, that milk should *never* be given to a fever patient. Milk is miscalled “liquid” food. It is

not; on the contrary it is the most solid kind of food after it has been in the stomach a while.

I believe more relapses in typhoid fever especially, are caused by the criminally stupid feeding of such patients than by any other cause. The next most guilty cause is drugging.

I will briefly report a case I was called by telephone, since treating the case first reported, to see in consultation with a young allopathic physician whom I had never seen nor heard of before. I met him about seven o'clock in the evening. The patient was a child of five years, which had been taken ill at a beach resort. It had been ill about a week when I was called. Typhoid symptoms were evident to me. There had been diarrhoea from the beginning, with a temperature of 104° in the axilla, marked delirium, sordes, great thirst and loathing of food. The physician had not thought of typhoid until that day, and was uneasy as to the effect on his standing with the family when they understood the situation. He asked me to "help him out," and I did so effectually, so that his "face was saved."

Notwithstanding the diarrhoea and loathing of food, he was giving castor oil and milk. Nature, fortunately, was wiser than he and still strong enough so that both were rejected by the stomach and thrown up.

It is not an easy proposition to find the indicated remedy in an irritable, feverish and spoiled child. My only hope was in the dreams and delirium. The fact that I had to deal with an allopathic doctor and family made it doubly difficult. They spoke and acted as though my persistent questioning in regard to what he said in his dreams or delirium was trifling and of no importance. I finally got the admission from the mother that the child complained and cried because "they were taking his 'piggies' away from him!" I asked what his "piggies" were, and, lo and behold, he meant his feet! I now felt that I had the key to the situation.

In the consultation room I gave the young doctor quite a lecture on homoeopathy. He acknowledged he had no medicine for the case: all he was giving were baths and castor oil! I told him the remedy I would give, and told him why I would give it. He was more than willing that I should prescribe. I gave him a powder of *Baptisia* 3d and one of the 30th, and told him to dissolve the former in 1-4

glass of boiled cool water, and give the child two teaspoonsful every two hours for 24 hours; then to do likewise with the 30th, and asked him to report, which he promised to do. I also urged him to cast aside prejudice and look into homoeopathy. He seemed impressed and promised to do so. I also told him that the child's delirium would cease, or at least change before he had finished the medicine I gave him. This may seem to have been a bold prediction to make in such a case to an allopathic physician; but an extensive experience with this remedy makes me absolutely certain that it will do just what I told him it would do. And it did! I met him on the street the second morning after, and he assured me that the delirium was all gone, and that the child was decidedly better and more quiet!

The patient recovered uneventfully, and I received a check for my consultation fee this morning.

Now, wouldn't you think that a bright, young physician, after an experience like that, would do as he promised he would do, viz: Come and see me, get some books, and, throwing prejudice aside, look into what I had told him was the "science of therapeutics" and demonstrated its truth at the bedside? Surely you would; surely anybody *should*. But, alas! prejudice, fear of ridicule from his O. S. colleagues, and a desire to train with the majority, forbade! And, alas! and alack! many of our own school are to a certain extent "tarred with the same stick."

PITUITRIN LOCAL INJECTIONS IN MENORRHAGIA. Koch (Giessen) among others, has extended the use of pituitrin. Formerly when menorrhagia was commonly referred to endometritis, curettment was the treatment mostly used, but since the studies of the endometrium have made it quite likely that uterine hemorrhage depends upon ovarian disease, remedial measures are sought for in other directions. This is particularly true when recognizable adnexal disease exists. The author has tried pituitrin, even in large doses, hypodermically, without much result in these cases. He was then led to injections into the tissues of the cervix itself of various drugs, such as adrenalin, preparations of ergot and finally pituitrin. The ergot preparations produced stormy and painful uterine contraction, but with 1 cm. pituitrin he produced a cessation of serious menorrhagias for forty-eight hours, although then it was necessary to repeat the injection. In applying the treatment in such cases it is of course necessary to avoid all traction upon the cervix and to move the uterus but little. Also is it necessary to avoid introducing the needle into a vessel. Several cases are reported in detail.—*Archiv. f. Gyn.* Vol. 98, 297.

Transactions of the Homoeopathic Medical Society of the State of Pennsylvania.

PRESIDENTIAL ADDRESS.

BY

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FELLOW members of this Society, I wish to thank you for the confidence bestowed in placing me in your highest elective office. I have assumed the duties of this office with a consciousness of my shortcomings and with a certain amount of embarrassment because of the splendidly able administrations of my two immediate predecessors, Doctors Wm. A. Stewart and Gilbert J. Palen.

We have in Pennsylvania the largest State society in the Union, the members of which, working unitedly could do far more than they are accomplishing to-day. They comprise some of the ablest and most eminent men in our profession with a rank and file of high order. And yet we are not getting the results from organized work that we should. Most of our members are working in their limited personal orbits for their immediate personal ends, which is commendable and praiseworthy as far as it goes, but it does not take into account the broad view that they owe a debt to their profession to their cult.

They practice their art under the banner of homœopathy and use the law of similars as a lamp for their feet and a guide to their pathway, and he is a rare homœopath indeed who does not pride himself on using this law of cure; for if he is true to his convictions, if he is true to himself, he believes that this is the most efficient method of curing disease.

They received this heritage from Samuel Hahnemann, a man of wonderful mental endowment, a profound philosopher who had a vision, and like the prophet of old proclaimed the law. They are benefitting to-day from the truth so discovered and

their patients are benefitted by the intelligent application of those truths. Believing this law of cure the best, it is natural that they should desire its continuance and their pride should be touched when it is assailed. They can do much in their individual spheres to give dignity to and inspire confidence in their faith, but that is not enough, because the fight being waged is not a hand to hand engagement. Part of this fight is without animus and springs from civic development, the higher standards of general education resulting in the demand by society for more time to be spent in study and preparation and more extensive teaching equipment in the colleges. We are handicapped here because of the lack of sufficient endowment of the Hahnemann Medical College of Philadelphia. The Board of Medical Education and Licensure compels a teaching and laboratory equipment, the development and operation of which require a large amount of money, of which amount, the fees charged the students are but a small part. So our cause is threatened here because of this lack of endowment of the very keystone of our cause in this State. This institution must have our co-operation both in supplying its student body and in providing its sinews of war.

Another phase of this fight springs from laws fostered by the organized efforts of those who do not believe we teach true doctrine, which laws would tend to hamper us in the practice of, what we believe to be the most efficient method of cure.

The individual is helpless against organized opposition of this kind and hence we have our State organization which represents and safeguards every homœopath in the State in all affairs that effect matters medical. I believe every member of this organization feels a sense of pride because of his membership, but there are too many who have not a personal interest in, nor a sense of responsibility to it. This hampers the work of the organization and limits its influence. I have consulted with various men over the State and it is the consensus of opinion that the State Society members enjoy a good meeting once a year and then, with the exception of a comparative few, forget organized State work until the next meeting. A large number do not go to the meetings at all. In considering this question of holding the interest of those who come to meetings and stimulating an interest in those who do not attend, would it not be well to devise some scheme whereby a representative

of the State organization could address every county society in the State at least once a year?

A committee of three or five could be appointed to organize a speakers' bureau, selecting men who are especially fitted for this work who could go to the various county societies and at a special meeting of each where all the membership had been drummed out, present the propaganda of State homœopathy and organization. Facts of interest could be brought before them concerning our State college, its student body and the new things it is doing—matters of State legislation, State examination and medical licensure; happenings at the previous State meeting and business of importance that may have been transacted there.

This information could be gotten by the committee from the various men most competent to furnish it, collated and put in the hands of the speakers and presented by them in their various individual ways to the societies.

I believe work of this kind would in a short time produce most telling results. Many fail to come to meetings because of lack of interest and they have no interest because they do not know what is going on over the State.

All this information it is true, can be had in our State journal, but many men do not read their journals as carefully as they should and some not at all. I believe that the personal appeal of man to man brings a stronger and more forceful message than the journal. The closer touch of the society with the individual who has not shown an active working interest will draw him into society work, which will be a source of satisfaction to himself and add another helpful and useful unit to the State organization.

It should, too, tend to a development of harmony among the members, for these picked men, having made themselves familiar with all the details of the work, not only in the Society but of the whole profession will bring correct information of all the inside work of the organization which will help to straighten out many a kink in some dissatisfied member. If we could all forget our little personal differences, could get out of our lazy lethargy, and in this organized work stand for the common good, Pennsylvania would stand out like the rock of Gibraltar in the homœopathic cause.

Last year, your president, Doctor Palen, recommended that, to stimulate more diffused interest, each local society should

have a special delegate, these to form an advisory committee to meet with the trustees of the Society. This, I believe, is in the right line and I trust that some action upon this will be taken at this meeting.

The present year is one of great moment for our cause. Homœopathy is on trial for its life. We have reached our Rubicon. The old school with its open and avowed drug nihilism, has declared its disbelief in its old formulas and methods of drug application and in a straightforward way has pocketed its chagrin and admitted its errors. They did not have a scientific law, in fact a law of any kind, and their ablest men have condemned their drug application to disease times out of number. There is a spirit abroad to-day among the latter day progressive men of our school to stand on the rock bottom principles of the law of similars and stop wasting time in efforts to measure the philosophy and reason for this law as seen by Hahnemann, who had not the advantage of our latter day discoveries, with the yard stick of modern knowledge and science. Hahnemann was a great reformer and when he laid down his premises and drew his conclusions did well for his day and generation. But with the advantage of our present day enlightenment do you think he would evolve some of the metaphysical speculations concerning his immortal discovery that he promulgated one hundred years ago? I think not. And so, instead of blind faith, I am glad to see the progressive spirit arising which is demanding scientific proof. Up to a very recent time science had not developed to a point where a scientific demonstration could be made, but I believe that now especially trained men have acquired such a proficiency in the use of chemical and biological knowledge that it is possible to differentiate a cure from a natural recovery. For the deep secrets of the processes of nature employed in the curative act are being laid bare under the microscope and in the physiological and biological laboratories. The life history of the antibody is already being written, and in Paris they are preparing moving pictures made through a microscopic lens showing the phagocyte at work destroying disease germs.

If there is a demonstrable scientific way, to show that the curative process of nature is stimulated or hastened by the exhibition of a drug prescribed according to the law of similars,

then for the benefit of mankind in opening the eyes of our old school brethren, God hasten the day and bring on the proof.

The committee appointed some years ago by the American Institute of Homœopathy, to consider the best ways and means for making this demonstration, of what we believe to be the greatest law of cure, has come out in the open with a proposal to the American Medical Association for a "joint investigation of the scientific merits of the methods of drug selection expressed by the formula *Similia Similibus Curantur*." It is a frank plea to this large and powerful organization, giving in detail the reasons for its action, and suggesting that a joint investigation, by a selected number of men from each school, be made at some research laboratory like the Rockefeller Institute of New York or the McCormick Institute of Chicago.

If this investigation is undertaken in a true, scientific spirit, with no bias from the homœopath and no animus from the dominant school, I firmly believe, the entire medical profession will acknowledge that Samuel Hahnemann and his followers have not labored in vain and that the once derided "*Similia Similibus Curantur*" has, like the stone rejected by the builders, become the chief corner stone of the temple.

Many of our men will object to this plea for joint investigation for various reasons, but I believe that it marks the best forward movement of our school for many years, to get out of the doldrums in which we have self-satisfiedly drifted. For many years we have been criticised for our stand pat policy and I believe with a certain amount of justice. We have been taught to accept the dogmas and unsupported speculations of the fathers in the faith without criticism. But the time is at hand, when, if homœopathy is to live and have the future our hopes and our faith believe is meet for it, this critical scientific and experimental investigation must be undertaken.

Our friends, the enemy, really have the demonstration well on the way. The exhaustive experiments of such scientists as Pasteur, Calmette, Koch and, more recently, Wright and Simon Flexner, have placed much evidence before the bar which is favorable to our side of the contention.

As yet they have offered no speculation as to whether the relation between the pathogenic power and the therapeutic power of the various agents they have used is antipathic, allopathic or homœopathic.

During the past year the State Board of Medical Education

and Licensure has raised the educational requirements for entrance into a medical college. To the former standard of a four years' high school course or its equivalent has been added one year of college credits. After January 1, 1914, before the graduate can enter practice he must have served at least one year as a hospital interne or engaged in one year of post graduate work. Then only can he take the examination for a license to practice medicine in this State. This Board has also devised a plan of grading medical colleges into three classes, according to their teaching and laboratory facilities.

Class A includes all colleges of the highest rank. An applicant from an outside State, for a license to practice medicine in Pennsylvania having graduated from a college in this class, and passed his State examination will receive a license without an examination if such State extends same courtesy to Pennsylvania.

Class B includes all colleges of second rank and all applicants must be examined.

Class C includes all other colleges being considered so deficient in teaching and laboratory equipment that graduates from these colleges whether located in Pennsylvania or any other State will be disbarred from taking an examination for license.

Very recently there has been started a weekly newspaper in this State edited by a physician, who from his utterances is a dyed-in-the-wool homœopath. The slogan of this publication is, "Make homœopathy the dominant school of medicine." We are in entire sympathy with this object and have read the few numbers that have been published with much interest, but it is questionable whether the rough and ready outpourings of this enthusiastic editor are conducive of the best results. I believe if he will fill his fountain pen with ink not so strongly acid his appeal would carry more weight, especially with the men in the East.

I believe it is not untimely to suggest that our colleges advise their graduates against breaking into specialism too soon after graduation. The man who has not had several years of general practice cannot bring to his specialty a broad judgment which he can only acquire by years of general all round work.

Our population is increasing and our output of physicians is decreasing. This spells good times for the young doctors beginning to practice. It is a most excellent work a committee of this Society has undertaken to point out the best locations for

these young physicians. In placing these men don't forget the rural and semi-rural districts need their services more than the big cities, which are already overstocked and where it takes years to establish a good paying practice. Competition here is keener than in the country and bad debts more plentiful.

I wish to thank the various members who have worked hard to make this meeting a success and trust that we shall all get enough enthusiasm for organized State work to keep us at work every day in the year.

BUREAU OF SANITARY SCIENCE

ANNA C. CLARK, M. D., *Chairman*

INCREASED RESISTANCE AN IMPORTANT FACTOR IN PREVENTION AND CURE OF TUBERCULOSIS.

BY

THOS. H. A. STITES, M. D.

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ANY study of tuberculosis very quickly brings us face to face with the fact that the infection exists in more or less quiescent form in a vast number of people who never suspect its presence, and who finally die from some other cause, their life histories entirely unaffected by its presence. Among the first to draw attention to this fact were the physicians who conducted the autopsies at the great morgue in Paris. Their figures have been supplemented by others until now there is a great mass of evidence to show that some time during life the majority of us harbor the infection, while not a few of the more advanced students are coming to the belief that among adults it is a rare exception to find anyone entirely free. This at once raises the question as to why only ten per cent. of us die of tuberculosis, and why we should make so much to do over a disease fatal in so small a percentage of cases. Of late years the tendency of medicine and of sociology has been to move along parallel lines. The one has adopted prevention as its motto, the other improvement of living conditions and thus both are moving forward hand in hand to a common goal. We have passed the point where the welfare of the individual is of importance only

to himself, and clearly see that his ills and his advantages are a portion of the entire social economy and as such are of prime interest to society in general. Few examples can be found more appropriate than this one of tuberculosis. Some years ago in a brief study of vital statistics in our State a map was prepared showing the tuberculosis mortality of different counties and it was clearly shown that those sections of the State most thickly populated yielded the greatest proportion of victims. It is acknowledged that wherever people crowd themselves together the living conditions of the poor tend to grow less hygienic, and it is here that the death rate mounts highest.

Everyone understands that some of us are more susceptible to disease than are others and each of us is more susceptible to some forms of disease than to other forms. Perfect health has been well defined as the perfect co-ordination of the body and all its functions with surrounding conditions and with each other. Any degree of health necessarily implies that to some extent our co-ordination is good, and when co-ordination exists some force must be exercised to break it down—in other words, we find natural resistance. The distribution of disease-producing organisms is so universal that without resistance the human race would very quickly perish from the earth. Knowing the habits of mankind and that the complete sterilization of everything with which we come in contact is neither possible nor desirable, it is most unlikely that any of us can live more than a very short time without taking into our bodies some form of pathogenic organism. It is only when resistance is at a low ebb, or when the attack is in overwhelming force that sickness results. It is upon this principle that from time out of mind people have been fighting tuberculosis, but the fight was being waged without any clearly defined conception of why the various measures were adopted. Within the last few months a well known English authority on tuberculosis has publicly announced the theory that we can never conquer tuberculosis except by maintaining the natural resistance of our people at such a high point that the infection will be overcome before it proceeds to the point of actual disease. The Germans are even more emphatic upon this point. Romer, of Marburg, believes that in many sections "nearly every child carries in its body the germs of tuberculosis, and that consequently in the great majority of cases adult pulmonary consumption develops in an organism infected since child-

hood." There are a host of others who could be quoted whose opinions are all substantially the same. We take it, the great lesson to be learned is the need of good hygiene.

It is hardly necessary to go into minute details as to the methods of maintaining natural resistance. Every physician keenly realizes the necessity for surrounding the prospective mother with the most favorable environment possible. We all know that the mother's good or ill health at this time influences the tendencies of her child. Proper infant feeding is a subject of utmost importance and is one upon which we can lay down no hard and fast rule. We know that there is no food equal to mother's milk and that babies fed upon it are far more likely to thrive than those fed in any other manner. It is nature's way, and here as in other things, nature's way seems the best way.

Cleanliness, proper housing, correct habits of exercise and rest, sensible clothing, the avoidance of excesses of any kind all make for the full development of the individual and the maintenance of his powers in the highest perfection. It is a natural law that specializing can only be at the price of neglect elsewhere. Investigation and study have conclusively shown that the mortality from tuberculosis is highest among the poorer classes and in the more thickly populated sections. Can there be any doubt as to the reason? What chance have babies who are neglected, fed upon dirty, or partly decomposed milk, and allowed to play in the filth of the gutter with clothing and skin always dirty, or women and children who are forced to work beyond their strength, or families who are crowded at night into small ill-ventilated, uncomfortable rooms—What chance have they to escape repeated infections and having become infected how can their bodies be expected to resist and overcome disease? We can never free ourselves of tuberculosis and other unnecessary diseases until after our working, housing and living conditions have been improved to the point where it is possible for our laboring people to live in a sanitary hygienic way.

In the efforts to cure or arrest tuberculosis in those who have yielded to its attack there has always been some attempt to work along the lines of natural resistance. The effort has not always been deliberate nor has it always been intelligently directed, but going away to a better climate has become traditional.

So far as we know there exists no means for directly combating the advance of tuberculosis except in such limited portions of the body as can be removed by surgery. Even here the remedy is probably only partial, for it is altogether unlikely that the bacilli are ever wholly confined to any one organ. We must feed the body, we must in every way surround the individual with conditions most likely to increase his general resistance—good hygiene again.

There has been a great advance recently in knowledge concerning biological products as a means of cure of disease. In some notable instances this form of therapy has given us a marvelous control of disease. Diphtheria is no longer a nightmare and typhoid fever has been almost banished from the ranks of the United States Army. May we not hope for some such result in other diseases?

One English writer, Lister, recently illustrated the subject of resistance in a clever manner. Resistance may be likened to an elastic cord of many strands, carrying a weight. If the weight be small and the cord strong, a slight addition to the weight has little effect. If the weight be greater, the cord will be stretched in proportion. If with the cord moderately extended we strike the weight a downward blow, it will stretch the cord still further, but its resiliency will immediately pull back the weight and raise it to a level above where it originally hung. If there is no interference it will continue to oscillate, finally coming to rest slightly below its original position. If, on the other hand, it were possible at the moment where the rebound is at its greatest to slightly strengthen the cord, the final position of the weight would be above its original place. Continue this indefinitely and finally a severe blow will have little effect. On the other hand, if we do nothing to support and strengthen the cord, the blows will gradually stretch it to a point where its elasticity will become completely exhausted, and finally it will break. The illustration is dual—in the first place, if resistance is sufficiently great, the blow will have no appreciable effect. On the other hand, if the blow has an effect, the resistance must be increased in time or the cord of life will be severed.

Investigation has taught us that biologic poisons have their antidotes,—that these antidotes are manufactured within the body itself. The dose of tubercle bacilli products injected into the body is followed by an increased effort of the system to

manufacture the antidote. If the dose administered is not too great,—in other words, if we do not overweight the elastic cord, there is an over-manufacture of antidote, and temporarily the system has gained upon the disease. If we have accompanied this by favorable hygiene, have given the body its proper chance and can continue the process sufficiently long without interference from other sources, the result will be a cure. However our elastic must be good and there can be no neglect to add the new strands. Therefore, when using tubercle bacilli products for purposes of cure, we must do so cautiously. In a system already overloaded with toxins, a further load of these products will do harm. The principle upon which we are working demands a gradual increase of the dose so long as the case progresses favorably. It equally demands its immediate reduction or entire remission should there be any sign of retrogression.

In its sanatoria and dispensaries, the State Health Department has been cautiously following the method of biologic treatment of tuberculosis with most encouraging results. One of the greatest difficulties has been to make our patients realize the necessity for continuing the treatment for a sufficiently long time. Too many are satisfied with incomplete results. Especially in dispensary practice it has been hard to control our cases—the poor cannot always follow instructions, as to exercise, diet, etc. In fact the conditions for a favorable outcome are never perfect, and yet if you will visit any dispensary where the methods have been patiently followed, you will be shown records of cases and patients themselves whose progress has been most satisfactory and the beginning of whose improvement was marked by the initiation of the treatment with biological products. As could be expected this is especially true in cases where the disease is glandular, for here the weight of disease has been least, and in such the Department is emphatic in advising that the biologic treatment always be tried. It is not a panacea, but in many cases the results are wonderful. We believe that the use of biological products is effective because of its bolstering up of general resistance or immunity. It may in time become advisable to encourage the use of tuberculin in much the same manner as we have now begun to vaccinate against typhoid fever. If we can increase resistance after infection has made itself felt, why not go a step further and prevent? Many laboratories are busy upon the study of the biolo-

gic products, and when they can be sure that we have one which is potent and at the same time harmless, there can be no logical objection to its use in this way. Meanwhile, let us go on with the general improvement of sanitary conditions, relying upon cleanliness to in some extent lessen the infective organisms, both in their prevalence and in their virulence. To create and maintain in early infancy a high state of resistance and to prevent so far as possible the infection of our babies is of even greater importance than similar steps later in life. We must continue to urge improved living conditions in an attempt to strengthen the general natural resistance of the race, and we must go on undiscouraged in the search for some means of producing immunity in those whose natural resistance is low. The increase of resistance must be the keystone of the arch.

POLLUTION OF RAILROAD TRACKS A MENACE TO PUBLIC HEALTH.

BY

ANNA C. CLARKE, M. D.

Two years ago I presented a paper before this Society on "Railroad Sanitation," reporting the status of the laws in the various States concerning the matter, and the awakening of the interests of sanitarians. Since then there has been an educational campaign started which has been joined by leading thinkers in preventive medicine. It may seem strange that physicians, whose business it is to preserve the public health, have been so derelict in a matter which so vitally concerns the health of all and should interest us sufficiently to enlist our hearty co-operation in safeguarding the health of ourselves and families, at least. Physicians have supinely accepted as an unavoidable evil, the unsanitary condition of our railroads' beds and even convinced themselves, if they have taken the trouble to think on the matter at all, that there is little danger, and even if there was there was no remedy for the condition. It is in answer to many inquiries as to the real dangers arising from our polluted railroads that I am prompted to further draw your attention to this subject.

As our large cities become more and more congested there has developed a general movement for a home in the suburban

parts and rapid transportation has allowed business men to live at long distances from business centers. This alone has brought about a very much increased passenger traffic. The question of handling the passenger traffic in a sanitary manner reached so important a point that an entire section of the Fifteenth International Congress of Hygiene and Dermography held in Washington in September, 1912, was devoted to the consideration of Hygiene of Traffic and Transportation. Nor was this giving undue importance to the subject when we consider that over six hundred million tickets are sold annually in the United States to persons traveling over our two hundred thousand miles of railroad. A large percentage of our people live in railroad coaches, they eat, drink and sleep there, a few are born there and many die in course of transportation. The railroad companies themselves give much thought and expense to sanitary cleaning and ventilation. The Pullman Company, through their superintendent of sanitation, Dr. T. R. Crowder, presented an exhaustive paper on sleeping car sanitation and ventilation. Other papers dealt with the disinfecting of cars, storage of foodstuffs and providing proper drinking water. In fact, nearly every question pertaining to the health and comfort of the traveler was ably considered. There were only two papers that mentioned the care of sewage or referred to the protection of the passenger from this source of infection. Dr. H. Taylor Cronk, of New York, gave a very finely illustrated and able paper on "Prevention of Disease Communicated Through Toilets in Use on Railroads," and Dr. Arthur M. Hume, of Michigan, urged the necessity for the maintenance of sanitary departments by common carriers. Dr. Hume put much emphasis on the necessity of a practical method of waste disposal.

Laws have been passed in many of the States abolishing the common drinking cup and the hand towel which are certainly steps in the right direction. How long must the public wait before some means is provided for the sanitary care of sewage? It is a matter of every day's practice and considered a necessity by the most illy informed to furnish some means of disposal of human excreta other than depositing it upon the earth without covering or disinfecting, least of all would such measures be tolerated if the public roads were used for such purposes. Yet this is the condition existing on our railroads. What right have we to assume that the traveling public are in

such a healthy condition that there is no danger of disease arising from such unsanitary conditions as now exist? A railroad's own rules cause the toilets to be closed when passing through large stations to prevent soiling the roadbeds, and yet allow the remainder of their tracks to be used as a dumping ground.

The most easily preventable diseases are those distributed by means of excreta, typhoid fever, hook-worm, tuberculosis, cholera, dysentery and other enteric infections, and a physician who neglected to have the discharges of a patient suffering from any of these diseases, disinfected, would be considered very careless to say the least.

Enteric diseases affect those of early and middle life, the same class of people who compose the greater proportion of the traveling public. Let us consider the dangers from one disease, taking typhoid fever as an example. Further light may be thrown on this problem by remembering that the death rate from typhoid fever in this country is 46.2 per hundred thousand per annum. As only about one in every ten dies, this would mean some 460 cases of typhoid fever each year for every hundred thousand of population. The proportion of typhoid patients that travel, either to their homes during the early stages of infection, back to their homes during the equally infectious stage of convalescence, or to a resort during convalescence is very large. Contract doctors send them away from mines, factories, etc., once a diagnosis is made. Summer resorts and hotels show them the door even upon suspicion and when we remember that the years of typhoid susceptibility are also the years of one's life when the lust of travel burns most freely in the blood, we will understand why we hear of them so often on the road. If the proportion of sick to well traveling on our railroads is only a small fraction of the sick to well as shown above, we would have several typhoid patients traveling over each mile of railroad in the United States each year. Would not a few years of this give complete infection to even a new roadbed, and if so is there any hope that any of the old roadbeds in the East, twenty, thirty, forty and even fifty years old, as they are, could remain free from contamination?

The old trunk lines of this country are infected for their entire length, and unless some radical change is made in dealing with railway excrement, this country will ere long be threaded and traversed in every direction with long and narrow, but

none the less deadly, zones of enteric infection, a permanent and ever-growing menace to the public health. Here in America, a new land, thinly populated, we have a death rate of 46.2 per hundred thousand, while England, an old country, densely populated and crowded, has a death rate of only eighteen. Of course it may be too much to believe that this is due solely to the lack of closets on English railway trains, but if the present form of railway closet in this country, were abolished, as it should be, the close approach of our figures to the low English death rate would surprise us.

In advancing proof of infection of these roadbeds, it must be borne in mind that there is at present in every community a certain, constant and very appreciable amount of typhoid fever which cannot be traced to any known source. It is surprising the number of cases in which the trail leads to some railroad. The Board of Health in our own State recognized this when they ordered the Lackawanna Railroad, after the epidemic in Scranton, to close their toilets while passing over the watersheds of that city. Railway employes are particularly prone to typhoid, and in one railway hospital nine out of ten of their typhoid cases were track men. By track men is meant section bosses and section hands, whose labors are directed to keeping the roadbed in good condition, taking out old ties and putting in new, leveling the surface, redistributing the ballast, etc. Why should this class of employes have more typhoid than brakemen, trainmen, conductors, etc.? Are we wrong in concluding that they are infected by the very conditions under which they work? Those who have sat on the observation platform of a rear coach in the summer time, and seen the trackmen swallowed up in clouds of stifling dust can realize why they are so prone to this disease. They are not only exposed by the dust and dirt thrown up by their picks and other tools, but every hour or so during the day must stand along the track and let some train pass, and are choked and blinded by the dust for several minutes after it has gone by. Not only track workers but those who ride by open windows and on the observation platforms of cars are alike exposed to infection. The wealthy passenger and the railroad official suffer with the common laborer. The passage of a train at high speed would blow clouds of this dust, laden with enteric infection, into the faces of persons standing or living along the line of track. If the fecal matter contained in this dust is that

from a typhoid patient, and containing viable bacilli, we can see that not only these people, but contents of drinking tanks and cups, the fruits, candies and other foods upon which the dust settles become at once dangerous. Do you think that I am overestimating the danger of the spreading of disease by this means? The report of the United States Army Commission, appointed to study the cause and reasons of the spread of typhoid fever in the camps of the volunteer army during the Spanish American War, proves conclusively the possibilities of typhoid fever infection through contaminated dust. I quote from the testimony of Lieut. Col. L. M. Maus, chief surgeon of the Seventh Army Corps:

"This regiment (the First Wisconsin) was peculiarly located, a shell road passed through it, two companies being located on either side of this road and very near to it. Their tents were perhaps not more than thirty or forty feet from the road. During June it was very dry here, and there was lots of fine dust which drifted on each side of the road and I am satisfied that the fecal matter that had been splashed out of the scavenger wagons passing along this road mixed with this dust and was inhaled by the men of these two companies. Besides these men would walk across this road and carry the dust into their tents. Most of the typhoid in this regiment came from these two companies. There were 130 cases from this regiment at one time. Not only are germs of various kinds carried by the wind, but flies, bees and other insects carry the infection into dwellings, deposit it on vegetation and take it to many places where it easily finds its way to water supplies. Any green foodstuffs growing along the line of track or awaiting shipment at a station would also be in imminent danger of contamination. I quote from an article in the *Philadelphia Press* of July 30th: 'As a result it is believed, of eating germ laden water cress, which was used to garnish the food served at the wedding breakfast, nineteen guests who attended the wedding of Mr. Jack Winchell, of New York, and Miss Elizabeth Burt, on June 24th, are suffering from a malignant form of typhoid fever. Simultaneously with the report that the bride and bridegroom had been stricken with the malady at Brunswick, Maine, where they had gone on their honey-moon, a number of cases were reported to Dr. A. A. Cairns, chief medical inspector of the Bureau of Health. An investigation was started at once and it was learned that in every instance

the patient had attended the wedding at the residence of the bride's parents. Dr. Cairns is satisfied that the fever was contracted at the wedding. He says that the fact that so many that attended have contracted the disease could hardly be a coincidence, and while he has not said definitely what article of food it was that contained the bacteria, he is of the opinion that it was the water cress.' "

Over fifty per cent. of all the cases of this fever are contracted during the months of August, September and October. These are first of all the traveling months, they are the hot and dry and therefore the dusty months: they are the fruit and ice and drink months, the months of uncooked green vegetables, and these are what makes them the typhoid months.

It is not the acute case of typhoid that the public has to fear. Far more dangerous are such cases as those known as Typhoid Mary and a guide in the Adirondacks known as Typhoid John who carried the infection in their systems for long years after all acute conditions had disappeared and both of whom were the cause of infecting several people. These two cases cannot be the only ones. In fact only recently has Dr. Ray Sanderson, a former Scranton man now practicing medicine in Canandaigua, N. Y., reported a case as published in the *Scranton Tribunc-Republican*. A patient in the Memorial Hospital, Mrs. Levi Taylor, aged 81, suffered an attack of typhoid fever fifty-four years ago, and it is claimed that she never became free of the germs, her system constantly throwing them off. Over twenty cases of typhoid fever have been directly traceable to her during the past fifteen years. There were probably many others of which it was impossible to secure records. Another case is that of Katie Fischer, 14 years old, an inmate of St. Mary's Female Orphan Asylum, St. Louis, Mo., who has caused seven deaths and seventy-two cases of typhoid in that institution.

Within a few years and from motives of mere decency, the custom has become general of locking the closets for the purpose of excluding the passengers from them on approaching or standing at important stations, a practice while contributing to the cleanliness of the station platforms, is decidedly objectionable on hygienic grounds. Only in rare cases, however, are the closets of the numerous passenger trains on a great trunk line kept locked for several miles upon approaching or after leaving the station, and then not for decency's sake, but in order

to protect a public water supply. Several roads in New York State are compelled by the Board of Health to close their closets at various points along their lines; and this has been done in other States where the road traversed a watershed. There are no similar precautions taken, however, in regard to crews of freight trains under like circumstances. All of these facts illustrate the crude and primitive character of the sanitary arrangements of our American railway trains, for, obviously, no occasional locking of closets on passenger trains, will ever be more than a partial and very superficial remedy for the present evils.

Quite apart from sewage disposal let us consider the hygienic aspect of locked closets on railways. Although it is true that some State Boards of Health have ordered the locking of closets while trains are going through watersheds, it seems also true that locking will never be a complete safeguard. There are times when people are ill, when they simply must get access to a closet. There are times when people so imperatively require this access, that they will tip the porter heavily, or do most anything in order to gain admittance. And they ought to obtain admittance. The locking of closets is an imposition and must be pronounced once and for all time an imperfect, crude and, not infrequently, a dangerous custom. The practice is rude and unhygienic, even in its least objectionable form of locking the closets only while the train halts at a station. For any longer period, such as for example, one road in Pennsylvania where they are locked about one hour while passing over a watershed, it is much worse. The practice besides being dangerous and unhygienic, is ineffective. How is an occupant to be driven from a closet when the train arrives at a watershed or approaches a station? The regulation is clearly ineffective and unworthy of modern industrial organization. It must be done away with, and that at the earliest possible moment.

What can be done about the matter? The time has come when we must insist that if railways find it practicable to carry large iron tanks under their cars for gas and refrigerating purposes, it can and must also carry there an iron or some suitable tank for sewage. Railways must somehow cease distributing sewage along their lines. The closets ought not to be shut up either at stations or anywhere else, so that the all-important personal hygienic requirements are interfered with.

At any rate, something better than the present crude, disgusting and dangerous custom must be devised. The direct deposit of sewage, which might be infected with the organism of enteric fever, cholera or a dozen other possible sources of human contagion, on the soil daily, without regard to surroundings or consequences should be forbidden. It is an hygienic anachronism and it must go. European roads having few or no closets on their trains, escape these difficulties at great discomfort to their passengers. We could have both safety and comfort at little expense. Has the time not come when we should take effective measures to put a stop to these conditions? Have we not reached a point in civilization sufficiently high to stop the scattering of excrementitious matter over our highways and bypaths? As far back as the days when Moses was leading the Children of Israel through the wilderness in search of the Promised Land, it was required that the people bury their excrement as a sanitary measure. In spite of the boasted civilization of the twentieth century, and our advance along many sanitary lines, we have yet to learn, or at least practice, some of the elemental principles of sanitation that were known and practiced by the ancients.

Infected roadbeds, relieved of their annual supply of new infection and natural culture media will, in time, be starved out, so to speak, but under present conditions the menace to health grows with time, grows with increase of population, with increase of traffic, with increase of disease, is self-perpetuating, and must be, for these very reasons, stopped.

A bill has been recently introduced, and is now pending in the New York Legislature, one clause of which reads as follows: "On and after January 1st, it shall be unlawful for any person, copartnership or corporation, owning, leasing, operating, or using any railway employing any form of motive power and located wholly or partly in the State, to discharge or cause or permit it to be discharged, from any passenger car, sleeping car, drawing room or parlor car, private car or other car carrying passengers, or from any caboose or construction, boarding or other car used by the crews or employes of any such railway company, which can or is or shall be owned, leased, operated, used, drawn or transferred by any such railway company, any solid or liquid human excreta either directly or indirectly upon the track, roadbed or right-of-way or other property owned, leased, operated or used by any such railway company, or onto

other private or public land or property crossed by such railway company, and within the bounds or on the boundary of any drainage area or watershed, the drainage from which flows either naturally or artificially in to the public water supply of any public or private water company or municipality, which water supply is or hereafter shall be, protected by the rules and regulations of the State Department of Health."

Michigan is at present revising its laws on railway sanitation and it is to be hoped that they will bring about the needed reform in this matter.

There have been a number of devices worked out to care for this sewage from railway trains, and it may be of interest to you to see those which are considered most favorable by sanitarians.

These devices all call for a receptacle to be placed under the car. There is one other way that would provide safety. This is for the roads to cement their roadbeds and provide a system of drains, water tight bridges, etc., in order to prevent any refuse from being thrown on the soil. A like plan was used by the Chicago, Milwaukee and St. Paul Railway Company, where their line passes over the Seattle watershed.

HEAD INJURIES OF THE NEWBORN.—Wilcox says it is conservatively estimated that in cases of forceps delivery, from 30 to 40 per cent. of the infants so delivered suffer more or less from intracranial hemorrhage. The majority of cases show the hemorrhagic centers to be in the parietal or frontal regions, close to the longitudinal sinus. The second most frequent center was just above or below the tentorium, or in the tentorium itself. While tentorium lacerations are the most fatal, they are by no means the most unfortunate, for many of the frontal and parietal lacerations produce clots, which by their continued pressure, tend to destroy the cells of the cortex, producing a porencephalia with all its attending mental defects. If the newborn child appears to be dead, and does not respond to the usual methods, such as clearing the respiratory passages, immersion in warm water, friction, etc., intracranial hemorrhage should be suspected. . . . If the child survives the first few weeks of life, and the clot continues to cause irritation, the symptoms are: Difficulty or inability to swallow, inequality of the pupils, frequently recurring convulsions, spasmodic screams, continued restlessness or drowsiness amounting almost to coma, muscular insufficiency, especially an inability to support the head. Later may come paralysis, or imbecility in some cases. It is entirely safe and reasonable to operate upon a newborn a few days or hours after birth with excellent chances of recovery.—*Abst., Amer. Jr. Obs.* Vol. 68, 196.

BUREAU OF GYNECOLOGY

G. W. HARTMAN, M. D., Chairman

CONDITIONS OF THE UTERUS SUGGESTING MINOR SURGICAL TREATMENT.

BY

G. W. HARTMAN, M. D., HARRISBURG, PA.

As the preparation of my paper progressed, the difficulty in differentiating minor from major conditions of the uterus, or those requiring minor or major treatment for their relief, became apparent. In the second place, diseases of the uterus are likely to communicate with the adnexa and contiguous structures. Diseases arising in the appendages of the uterus, per contra, often extend to and involve that organ in one way or another. For these reasons I desire at the outstart to solicit your indulgence if I depart from a strict discussion of my announced title.

There are many diseased and complaining women who are required to seek our assistance in their desire to get relief from distressing symptoms due to the minor uterine ailments. These, and they are very numerous, show the need for considering these diseases.

I am convinced that many major abdominal and pelvic operations could be prevented if the lesser diseases of the uterus and adnexa, which always precede and, if not checked, lead up to, serious complicated inflammations, were brought to the attention of the physician as soon as they cause distress;—provided he gave them the proper treatment.

The conditions to be considered are: Metritis, endometritis, parametritis and gonorrhœal cystitis.

While these conditions may *demand* surgical treatment, I am willing to admit that it is difficult to suggest rules that might be used invariably in choosing minor surgery or drug therapeutics in a given case. Some cases recover when let alone altogether. The cases of metritis that suggest mechanical treatment are those which result from the introduction of septic instruments into the cavity of the uterus; those which become septic as a result of a criminal abortion, those which fol-

low an incomplete spontaneous abortion, and those which are associated with childbed-fever.

The minor operations to be suggested in the treatment of metritis are: Intra-uterine irrigation and uterine curettage. The irrigation should be done under careful antiseptic precautions. Permanganate of potash, one dram of saturated solution to a quart of warm sterile water, or a solution of pix cre-sol (medium strength) may be used. Curettage in septic metritis is a "two edged sword." In some cases, early, it is invaluable. In others, particularly if used after sepsis is well established, it is harmful, and may be causative of complications that become fatal. If the presence of strepto-cocci and colou bacilli can be demonstrated, curettage should not be done, because of the likelihood of producing, or aggravating an already existing pelvic peritonitis. I do not practice the early and indiscriminate curettage that was advocated ten or fifteen years ago in these cases of abortion, but give nature a chance to prepare to ward off infection, and, secondly, when she will, to completely empty the uterus. The patient who is far advanced in sepsis should have only expectant treatment, unless the attendant is prepared to do a vaginal puncture. I believe we sometimes yield to the entreaties of the consultant to curette when we ought to drain. Drainage is accomplished by making an incision through the posterior vaginal wall into the cul-de-sac of Douglass. Vaginal puncture is a minor procedure, the more liberal use of which will save some cases when life is despaired of. I am sure the operation is not utilized as frequently as it should be, after treatment of criminal abortion. The pelvic peritonæum becomes wounded by bacterial invasion, and nothing will relieve its embarrassment so readily as drainage. I might say, in passing, that it seems to be a fact that forced abortions are too little condemned by the profession. The criminal procedure is condoned; or, at least, made light of, and the abortionist is thereby indirectly assisted by us. Those whose lives we are authorized by the State to guard are being sacrificed or ruined, and we remain silent.

It is gratifying to listen to such a paper as that written by my colleague, Dr. Swartz, because it places the emphasis on the treatment intended to make pregnancy possible and to encourage and foster motherhood. Another way to foster motherhood is to oppose and prevent all the inflammatory condi-

tions enumerated above by fighting and routing the arch-demon, Gonorrhœa.

If I were "well up" on eugenics, and understood all the benefits the recently enacted laws are expected to confer on our rising womanhood, I would want to discuss that subject here.

I hope that it is the intention of those whose duty it is to execute the laws, to enforce those fully and go the limit, that have to do with the production of better citizenship, and the protection of our innocent, unsuspecting, pure young girls who are willing to assume the responsibilities of home building, and the dangers and suffering of maternity.

The fellow who lapses, occasionally, in his moral status is the one who is quite likely to infect his associate even before marriage, and produce a one-child sterility after he is married.

Gonorrhœa, besides causing sixty to seventy per cent. of uterine and tubal disease, may cause cystitis and pyelitis.

The minor operation of cystoscopy must be mentioned here. Pyelitis could be prevented in many cases, and cystitis cured more readily if the cystoscope were used more generally.

Another result of gonorrhœa in the female is the involvement of the vulva-vaginal glands. The frequent cleansing of the vulva with permanganate solution is recommended by some gynæcologists to prevent the infection of those glands. The actual cautery may cut short the beginning infection of the same. When they have become badly infected and abscessed, free incision and drainage is necessary.

Endometritis may respond to the same treatment as outlined for the deeper seated metritis. Dr. Kelly, of Baltimore, recommends the use of the thermo-cautery in the treatment of the persistent leucorrhœa of chronic endo-cervicitis. I have used the method several times with satisfactory results. The cylindrical cautery tip is inserted into the cervical canal to destroy the hyperæmic, hyper-secreting glands. This treatment can be done without too great discomfort, in the absence of an anæsthetic.

I will mention para-, and peri-metritis only to call attention to an early symptom of malignant disease of the womb. I refer to a contracted condition of either side that gives one the idea of the presence there of adhesions. In the beginning of the condition, the lower segment is simply drawn toward that side, projecting the corpus uteri in the opposite direction. Later there will be menorrhagia and metrorrhagia. When dilatation

and curettement is under consideration for the relief of hemorrhage from the womb, it is well to keep that symptom in mind. The operation under those conditions will be harmful. Nothing less radical than a hysterectomy should be thought of, and that operation must not be postponed. Many general practitioners advise delay until they can make a positive diagnosis, and then often advise against an operation on the ground that they are frequently unsuccessful. This advice comes because the bad results that are sure to follow a "too late" operation, give them the idea that all operations for the removal of carcinomata are futile. Until there is some better method devised for the treatment of cancer, than those known to the profession at the present time, we must insist upon the surgical procedure in every case that comes under the physician's observation early enough to be operated upon.

I have desired to make this paper commonplace and simple, and if the matters touched upon interest the Society sufficiently to encourage discussion, I will be gratified.

UTERINE DEFLEXURES A BARRIER TO PREGNANCY.

BY

J. ROSS SWARTZ, M. D., HARRISBURG, PA.

To select a subject and offer any form of suggestion for the treatment of such a condition, supposedly to be passed up to those who specialize in this branch where unsound humanity is concerned, may smack of assurance, but my excuse is that occasionally a general practitioner even is consulted for relief in just such matters. For this reason I make the appeal to those who do not specialize, that much can be done to aid those requiring relief.

Experience the last few years has satisfied me that much can be done for women who wish to become mothers, and who are suffering from uterine deflexures and are unwilling to undergo surgical operations for such conditions. We find many young women apparently well developed, though disposed to adipose, who, on examination, reveal an infantile uterus, with a conical cervix, canal is narrowed and body deflected, mostly retroverted. Dysmenorrhea is not necessarily an accompani-

ment of this condition and few nervous manifestations are noted as well. Possibly some effort has been taken to interfere with natural tendencies, until a time arrives when motherhood is desired. It is at this time that the family physician is consulted and conditions detected. Requests are made for assistance to overcome any abnormalities, if present, that the desired end may be attained. During recent years it has been my good fortune to aid successfully three young women, carrying them through the gestation period, with resulting healthy offspring. The narrow canal was slightly dilated at repeated visits, no violence being used, and thus avoiding any rupture of the mucous membrane. At the same time light manipulation of the fundus was practiced to break up any slight adhesions, after which a pessary was placed, with the advice to assume daily, the proper posture, remaining in this position for at least five minutes, to aid the uterus in maintaining its newly appointed position. Some attention was given to the period of copulation and advice furnished for care after, for a time, that we could secure the benefit of every detail. These young women had been married for some years prior to any means being sought, though individual efforts had been used without results. I was flattered in the belief the slight attention given was an important factor to the end attained. Not every attempt was so successful, I can assure you, as there were failures, as well as those that follow more elaborate and radical measures used, in hands more skilled than those having limited opportunities.

The sole object of this paper is to prove that much can be accomplished in these cases and all necessary aid furnished by the woman herself, when the matter is placed before her in its proper light. My concern is less in relation as to how to accomplish the end desired than to be able to encourage those who despair of being able to become mothers; for as you well know, after years of disappointment, the mental condition becomes the important factor, so that any effort on the woman's part is latent, and desired results, when attained, are more than compensatory for anything you have done to further that end.

**BUSINESS TRANSACTIONS OF THE HOMŒOPATHIC MEDICAL SOCIETY
OF THE STATE OF PENNSYLVANIA.**

FIFTIETH SESSION—BEDFORD SPRINGS, PA., SEPTEMBER 2-4,
1913.

FIRST DAY.

THE morning session was called to order at 10.30, the President of the Society, Dr. H. S. Nicholson, of Pittsburgh, in the chair.

The invocation was delivered by Rev. Dr. J. Alfred Eyler, of Bedford.

The Address of Welcome was made by Dr. W. J. Martin, of Wilkinsburg, chairman of the Entertainment Committee.

The Response to the Address of Welcome was made by Dr. G. Harlan Wells, of Philadelphia.

Dr. Nicholson resigned the chair to Dr. J. M. Heimbach, of Kane, second vice-president, and then read the Address of the President. (See page 1.)

The President's Address was referred to a committee, consisting of Dr. J. M. Heimbach, of Kane; Dr. W. M. Hillegas, of Philadelphia, and Dr. R. T. White, of Pittsburgh.

The Report of the Secretary was read by Dr. E. H. Pond, of Pittsburgh.

**REPORT OF COMMITTEE ON ORGANIZATION, REGISTRATION AND
STATISTICS.**

September 17, 1912.

To the Homœopathic Medical Society of the State of Pennsylvania:

Your Committee on Organization, Registration and Statistics presents its annual report for publication. A list of the local societies and clubs of the State, and of the hospitals and dispensaries, and various homes and sanatoria under homœopathic management is given, with detailed data concerning them. We desire, through the medium of this report, to thank those who have answered our requests for information.

Respectfully submitted,

E. H. POND, M. D., *Chairman.*

Societies.

Allegheny County Homœopathic Medical Society of Pitts-

burgh, Pa. Number of members, 105. Organized. Secretary, Charles A. Ley, M. D., 1709 First National Bank Bldg., Pittsburgh, Pa. President, Edw. P. Clark, M. D., 5801 Fifth Ave., Pittsburgh, Pa. Annual dues, \$10. Meets third Wednesday each month, 8.30 P. M., at Library of the Homœopathic Hospital, Center and Aiken Aves.

Alumni Association Hahnemann Medical College and Hospital of Philadelphia. Number of members, 1700. Secretary, Edwin P. Nesbit, M. D., Bryn Mawr. President, Deceased. Time and place of meetings, annually during commencement at Hahnemann College, Philadelphia.

Beaver County Homœopathic Medical Society, of Beaver County. Organized 1883. Number of members, 14. Secretary, Dr. Wm. Raymer, Beaver Falls, Pa. President, Dr. W. M. Yost, Rochester, Pa. Annual dues, \$1.00. Time and place of meetings, monthly at office of members.

Berks County Homœopathic Medical and Surgical Society, Reading, Pa. No report submitted this year. Last year secretary was Margaret Hassler-Schantz, M. D., 402 N. 5th St., Reading Pa.

Clinico-Pathologic Society of Philadelphia, Philadelphia, Pa. Organized 1894. Number of members, 103. Secretary, Benj. K. Fletcher, M. D., 319 S. 16th St., Philadelphia, Pa. President, Dr. S. W. Sappington, 124 S. 16th St., Philadelphia. Annual dues, \$2.00. Time and place of meeting, third Saturday from October to May, Hahnemann College.

Carl V. Vischer Medical and Surgical Society, Philadelphia. No report submitted this year. Last year Secretary was W. H. A. Fitz, M. D., 3134 Aramingo Ave., Philadelphia.

D. P. Maddux Clinical Club, Chester, Pa. No report submitted this year. Last year Secretary was R. C. Casselberry, M. D., Chester, Pa.

East End Doctors' Club, Pittsburgh, Pa. No report submitted this year. Last year the Secretary was C. I. Wendt, M. D., 600 Shady Ave., E. E.

Euphron Club of Philadelphia, Pa. No report submitted this year. Last year the Secretary was G. Morris Golden, M. D., 1449 Venango St., Philadelphia, Pa.

Goodno Homœopathic Medical Society of Lancaster, Dauphin and York Counties. Organized October 12, 1899. Number of members, 42. Secretary, W. E. J. Bomberger, M. D., 1450 Market St., Harrisburg, Pa. President, Dr. R. L. Perkins, Harrisburg, Pa. Annual dues, \$1.00. Time and place of meetings, second Thursday of April, June, August and October, at Harrisburg, York, Columbia and Lancaster.

Hahnemann Club of Philadelphia. Organized 1872. Num-

ber of members, 8. Secretary, Thos. S. Dunning, M. D., 1328 N. 15th St., Philadelphia. President, H. T. Weaver, 1433 Spruce St., Philadelphia. Annual dues by assessments. Time and place of meetings as appointed monthly.

Hahnemann Round Table of Philadelphia. Organized November 26, 1906. Number of members, 8. Secretary, Margaret B. Webster, M. D., 1703 Chestnut St., Philadelphia, Pa. President, Margaret C. Lewis, M. D., 4027 Spring Garden St., Philadelphia. Annual dues, \$1.00. Time and place of meetings, last Saturday evening of month—1703 Chestnut St.

Homœopathic Medical Society of Chester, Delaware and Montgomery Counties. Organized October 5, 1858. Number of members, 76. Secretary, Isaac Crowther, M. D., 800 Madison St., Chester, Pa. President, John W. Pratt, M. D., Coatesville, Pa. Annual dues, \$1.00. Time and place of meeting, Bimonthly, second Tuesdays; Annual, October in West Chester, April in Chester. Others as selected.

Homœopathic Medical Society of the County of Philadelphia, Philadelphia, Pa. Organized 1866. Number of members, 270. Secretary, Wm. M. Sylvis, M. D., 1903 S. Broad St., Philadelphia. President, Dr. H. P. Leopold, 1825 Chestnut St., Philadelphia. Annual dues, \$2.00. Time and place of meetings, second Wednesday each month except July and August.

Homœopathic Medical Society of Lebanon County, Lebanon, Pa. Organized September 15, 1904. Number of members, 12. Secretary, F. E. Bamberger, M. D., 202 7th St., Lebanon, Pa. President, W. T. Bruce, M. D., 29th St., Lebanon, Pa. Annual dues, \$1.00. Time and place of meetings. Had no meetings for the past few years.

Homœopathic Medical Society of Twenty-third Ward, Philadelphia. Organized October, 1881. Number of members, 25. Secretary, John D. Boileau, 804 W. Lehigh Ave., Philadelphia. President, W. N. Hammond, Weightman Bldg., Philadelphia. Annual dues, \$1.00. Time and place of meetings, members' homes in rotation.

Homœopathic Medical Society of Erie County, Erie, Pa. Organized 1893. No report submitted this year. Last year the Secretary was C. A. McNeill, M. D., 137 E. 18th St., Erie, Pa.

Homœopathic Pharmaceutical Association. No report submitted this year. Last year the Secretary was E. P. Anshutz, M. D., 1011 Arch St., Philadelphia.

Homœopathic Medical Society of Chester County, West Chester, Pa. No report submitted this year. The Secretary

last year was S. A. Mullin, M. D., 29 S. High St., West Chester Pa.

Homœopathic Hospital and Dispensary Association. No report submitted this year. Last year the Secretary was Henry F. Schantz, M. D., 402 N. 5th St., Reading, Pa.

Lehigh Valley Homœopathic Medical Society of Lehigh Valley. Organized 1878. Number of members, 43. Secretary, S. C. Swartz, 115 S. 6th St., Allentown, Pa. President, H. A. Fehr, 9th and Turner Sts., Allentown, Pa. Annual dues, \$1.00. Time and place of meeting Allentown, Bethlehem and Easton, consecutively, 1st Thursday of March, June, September and December.

Luzerne County Homœopathic Medical Society, Wilkes-Barre, Pa. Organized 1899. Number of members, 20. Secretary, Dr. O. K. Grier, 389 N. Main St., Wilkes-Barre. President, Dr. E. E. Dreher, 114 Academy St., Wilkes-Barre, Pa. Annual dues, Assessments. Time and place of meetings, semi-monthly, Wyoming Valley Homœopathic Hospital, 149 Dana St., Wilkes-Barre, Pa.

North Penn Homœopathic Medical Society. Organized 1908. Number of members, 9. Secretary, H. O. Williams, M. D., Lansdale, Pa. President, S. C. Moyer, M. D., Lansdale, Pa. Time and place of meetings, meets every six weeks, at physicians' residences.

Oxford Medical Club, Philadelphia, Pa. Organized 1885. Number of members, 18. Secretary, Dr. C. W. Simmons, 1628 N. 18th St., Philadelphia, Pa. President, Dr. L. B. Griffith, 2449 Columbia Ave., Philadelphia, Pa. Annual dues, \$5.00. Time and place of meetings, different members' offices, monthly.

Philadelphia Society for Clinical Research, Philadelphia, Pa. Organized 1906. Number of members, 18. Secretary, Perry Tindall, M. D., 1613 South Broad St. President, Dr. Walter Cheeseman, 52d St., above Race. Annual dues, \$6.00. Time and place of meetings, various houses of members.

Philadelphia Academy of Medicine. No report submitted this year. Last year the Secretary was Wm. M. McKeever, M. D., Philadelphia, Pa.

Pennsylvania Society of Physical Therapy. No report submitted this year. Last year the Secretary was Walter C. Barker, M. D., 2820 Girard Ave., Philadelphia, Pa.

Philadelphia Medical Club. No report submitted this year. Last year the Secretary was E. H. Van Duesen, M. D., Vine-land, N. J.

West Branch Homœopathic Medical Society, West Branch Valley. Organized 1907. Number of members, 12. Secre-

tary, Adelbert D. Dye, M. D., 250 Pine St., Williamsport, Pa. President, W. L. Gerhart, M. D., 36 S. Third St., Lewisburg, Pa. Annual dues, \$1.00. Time and place of meetings, July and January, wherever decided.

Wm. B. Van Lennep Clinical Club, Philadelphia, Pa. Number of members, 20. Secretary, John E. James, Jr., 118 S. 19th St., Philadelphia, Pa. President, Dr. J. Dean Elliott, 1421 Spruce St., Philadelphia. Annual dues, \$2.00. Time and place of meetings, first Tuesday in each month excepting July, August and September, at place designated by host.

Woman's Homœopathic Medical Association, Pittsburgh, Pa. Organized October 11, 1899. Number of members, 10. Secretary, Lydia Baker Pierce, M. D., 5661 Beacon St., Pittsburgh. President, Dr. Millie J. Chapman, Springboro, Pa. Time and place of meetings, first Thursday of each month at offices of various members.

The Germantown Homœopathic Medical Society, of Philadelphia, Pa. Number of members, 157. Organized 1883. Secretary, Landreth W. Thompson, M. D., 1701 Green St., Philadelphia, Pa. President, Frank L. Abbott, M. D., 3012 N. Broad St., Philadelphia. Annual dues, \$10. Time and place of meetings: change place each month, third Monday.

Women's Homœopathic Medical Club of Philadelphia, Philadelphia, Pa. Organized November 5, 1883. Number of members, 15. Secretary, Ida Virginia Reel, M. D., 4027 Spring Garden St., W. Philadelphia. President, Mary Branson, M. D., 1504 Locust St., Philadelphia, Pa. Annual dues, \$1.00. Time and place of meetings, at homes of different members.

Hospitals.

Children's Homœopathic, Philadelphia, Pa. Incorporated 1877. Opened to patients 1877. Executive Officer, Walter Strong, M. D., 2105 North 15th St., Philadelphia, Pa. Number of beds, 179. Number of patients treated last year, 1959. Cured, 1407. Relieved, 179. Not relieved, 72. Died, 224. Estimated value of grounds and hospital, \$251,314.26. Sources of income: Voluntary contributions and State aid.

Christian Home for Women, Pittsburgh, Pa. No report submitted this year. The Executive Officer last year was Mrs. J. F. Smith, 610 Sherman Ave., N. S., City.

Florence Crittenden Home, Scranton, Pa. No report submitted this year. Last year the Executive Officer was F. M. Hannah, 446 Madison Ave., Scranton, Pa.

Hahnemann Hospital of Philadelphia. No report submit-

ted this year. Last year the Executive Officer was O. R. Edwards, Philadelphia, Pa.

Hospital of the Women's Homœopathic Association of Pennsylvania. No report submitted this year. Last year the Executive Officer was Mrs. F. B. Skinner, Philadelphia Bank Building.

Homœopathic Medical and Surgical Hospital. No report submitted this year. Last year the Executive Officer was L. A. Shollenberger, M. D., Reading, Pa.

Hahnemann Hospital of Scranton, Pa., 316 Colfax Ave., Scranton, Pa. Incorporated 1897. Opened to patients November, 1897. Executive Officer, Eleanor S. Oakford, President, 1122 Myrtle St., Scranton, Pa. Number of beds, 75. Number of patients treated last year, 957. Cured, 736. Relieved, 98. Not relieved, 31. Died, 55. Estimated value of hospital and grounds, \$175,000. Source of income: Free-will offerings of the public, rentals of private rooms and a small appropriation from the State.

J. Lewis Crozer Home for Incurables and Homœopathic Hospital, Upland, Pa. Incorporated 1897. Opened to patients 1900. Executive Officer, Mrs. J. Lewis Crozer. Number of beds, 75. Number of patients treated during the last nine months, 426. Cured, 339. Relieved, 36. Not relieved, 5. Died, 24. Sources of income: Endowments.

Keystone Hospital, Harrisburg, Pa. Opened to patients November 22, 1910. Executive Officer, G. Willis Hartman, M. D., 801 N. 3d St., Harrisburg, Pa. Number of beds, 15. Number of patients last year, 196. Cured, 161. Relieved, 16. Not relieved, 5. Died, 14. Estimated value of hospital and grounds, \$50,000. Sources of income: Room charges. We treat only pay patients.

Philadelphia Home for Infants. Report submitted this year, was same as last year. The Executive Officer was E. G. Whinna, M. D., 320 N. 41st St., Philadelphia, Pa.

Pittsburgh Sunshine Children's Home. No report submitted this year. Last year the Executive Officer was Mrs. W. H. L. Newingham.

St. Luke's Homœopathic Hospital, Philadelphia, Pa. Incorporated March 9, 1896. Opened to patients June 9, 1896. Executive Officer, Dr. William Keim. Number beds, 55. Number of patients treated last year, 1137. Cured, 683. Relieved, 304. Not relieved, 50. Died, 100. Estimated value of hospital and grounds, \$125,000. Sources of income: State aid; contributions and board of private patients.

The Walter Sanitarium, Walters Park, Pa. Opened to patients 1874. Executive Officer, R. W. Walter, M. D. Num-

ber of beds, 150. Number of patients treated last year, 500. Estimated value of grounds and hospital, \$200,000. Sources of income: From pay of patients.

West Philadelphia General Homœopathic Hospital. No report received this year. Last year the Executive Officer was John S. Wilson, 1234 N. 54th St., Philadelphia, Pa.

Woman's Southern Homœopathic Hospital of Philadelphia. Incorporated 1896. Opened to patients 1896. Executive Officer, Miss Anna M. Miller, 1911 Mt. Vernon St., Philadelphia. Number of beds, 58. Number patients treated last year, 451. Cured, 332. Relieved, 64. Not relieved, 8. Died, 13. Estimated value of hospital and grounds, \$150,000. Sources of income: Voluntary contributions.

Wyoming Homœopathic Hospital, of Wilkes-Barre, Pa. No report.

Dispensaries.

Children's Homœopathic, Philadelphia, Pa. Incorporated 1877. Opened to patients 1877. Secretary, Walter Strong, M. D., 2105 North 13th St., Philadelphia. New patients treated last year, 12,033. Patients treated last year, 23,144. Prescriptions given last year, 22,235. Visits made to patients outside, 382.

Dispensary of the Homœopathic Medical and Surgical Hospital, Reading. No report received. Secretary for last year was L. A. Shollenberger, Reading, Pa.

Hahnemann Hospital, of Philadelphia. No report received. Secretary for last year was O. R. Edwards, Philadelphia, Pa.

Homœopathic Medical and Surgery Dispensary of Pittsburgh. No report received. Secretary last year was Geo. L. McCoy, 5514 Baum St., City.

St. Luke's Homœopathic Dispensary, Philadelphia, Pa. No report received. Secretary last year was Miss Mary E. Lewers, 81 Fisher's Lane, Philadelphia, Pa.

West Philadelphia General Homœopathic Hospital and Dispensary. No report received. Last year the Secretary was John S. Wilson.

The Report of the Treasurer was presented by Dr. Ella D. Goff, of Pittsburgh. It was as follows:

TREASURER'S REPORT.

Annual Report of Ella D. Goff, Treasurer, for the fiscal year ending September 1, 1913.

DR.

1912 Sept. 16 To balance	\$1,348.42
1912 Sept. 1 To Annual Dues collected	1,353.00
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	\$2,701.42

1912.

CR.

Oct. 5. By order 137, George B. Cook, stenographer	\$100.00
By order 138, Ralph Bernstein, for arranging meeting at Delaware Water Gap	30.00
By order 139, Monroe Publishing Co.	2.00
By order 140, Gracye Druit Latus, advance press notices	19.00
By order 141, Patterson Printing House ...	19.00
By order 142, E. H. Pond, Secretary, traveling, expressage, printing, postage	80.00
By order 143, The Dick Press, for envelopes and booklets	37.75
By order 144, Ella D. Goff, Treasurer, for traveling and printing	68.75
By order 145, Kennedy Printing Company ..	11.75
Dec. 30. By orders 146, 147, HAHNEMANNIAN MONTHLY, from January, 1912, until April 11, 1913	282.00
1913.	
April 5. By order 148, HAHNEMANNIAN MONTHLY, for 364 subscribers	728.00
By order of the President, Gilbert J. Palen, to E. Petric Hoyle, M. D., for International Homœopathic Council	50.00
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	\$1428.25
Sept. 1. To balance	\$1272.42
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	\$2700.67

Respectfully submitted,
 ELLA D. GOFF, *Treasurer.*

It was moved and seconded that this report be adopted. Carried.

The President appointed as members of the Committee to Audit the Treasurer's accounts, Drs. C. A. Ley, of Pittsburgh; H. B. Bryson, of Pittsburgh, and S. W. S. Dinsmore, of Sharpsburg.

A partial report of the Board of Trustees was presented by

Dr. William M. Hillegas, of Philadelphia, who said that a meeting had been held at Philadelphia in April to attend to the affairs of the Society and make arrangements for the Bedford meeting, and that a further report would be presented later.

The Report of the Committee on Legislation was read by Dr. J. J. Tuller, of Philadelphia, its chairman, and was as follows:

REPORT OF LEGISLATIVE COMMITTEE.

Mr. President, and Fellow-Members of the Society:

As chairman of your Committee on Medical Legislation I desire to make a brief report of what has occurred in the past year in legislative work in this State. There appears to have been, throughout the country generally, an almost insane craze to raise the standard of Medical Education to an almost prohibitive point. The schools generally throughout the land, both individual and in many cases those connected with universities have suffered intensely as the result of this work. Many institutions that were apparently building strong foundations for the practice of medicine have been forced out of existence. Others have been compelled to consolidate with similar institutions in order to maintain their position. The schools of the State of Pennsylvania, however, in spite of the fact that the medical laws of this State are equally, if not more stringent than those of any other State in the Union, have been able to continue and to develop according to the demands made by legislative enactment. Of the numerous Homœopathic schools throughout the country many have gone down. The Hahnemann, of this State, however, hard as the struggle has been, has been able to meet its obligations and has proven itself capable of taking a position among the first Medical Educational Institutions of any denomination in this country.

The late attempt to obtain State appropriation for the aid of Medical Educational Institutions of the individual type in this State failed only because of the Governor's veto, and while it has created a hardship upon these institutions it will not force their doors to close because of the determined effort of individuals, but it is absolutely certain that if this character of medical legislation continues the State will be compelled to appropriate funds to support these individual institutions. It is for the purpose of rousing the interests in the State for the financial support of our medical college that I embody these remarks in this report. The last step in advancement in medical education was to force the legality of the fifth or interne year in our medical schools and to compel the adoption of a preliminary year as a preliminary requisite to the entrance into a

medical school, of a standard equal to one year of college work or a year spent in the study of Chemistry, Biology and Physics and a modern language other than English. Henceforth, then, a college term must have over a four years' graded high-school course, the required standard preliminary year, making the course six years. The law goes on to provide a certain control over such hospitals as shall take students having completed their course up to the interne year, as internes. This was deemed absolutely necessary that the Bureau of Medical Education and Licensure should have some equal standard to judge of the fitness of a student to be licensed after his year of internship. It has not been the raising of the standard that has wrought a hardship upon these institutions, but the suddenness with which it has all been accomplished.

Possibly the greatest menace to our school and the profession generally is the struggle on the part of the Pharmacists to gain upperhand and control of the dispensing of all substances used as medicine. No less than nine different bills were introduced at the last Legislature of different types to bring about this end. It will be necessary for the State Medical Societies of all denominations to watch closely this move, for, if the measures are successful in their enactment, the restrictions placed upon medical men will absolutely end in seriously crippling their powers for good and the laity will suffer enormously thereby. Our future efforts, therefore, must be directed toward this end.

Respectfully submitted,

JOHN J. TULLER, *Chairman.*

The Report of the Committee on Membership was presented by its chairman, Dr. Charles A. Ley, of Pittsburgh. It was as follows:

REPORT OF THE CHAIRMAN OF MEMBERSHIP AND PUBLICITY
OF STATE SOCIETY.

I have the following names proposed for membership:

Dr. Wallace Bulford, 1114 Pennsylvania Ave., N. S., Pittsburgh, Pa.

Dr. T. I. Cottom, 217 Main St., Carnegie, Pa.

Dr. W. E. Boggess, 4919 Center Ave., Pittsburgh, Pa.

Dr. Joseph L. Conrad, 123 Fifth Ave., McKeesport, Pa.

Dr. M. W. Livingston, Latrobe, Pa.

I also present two bills, one for \$16.21 from Miss Mae Gasmire, and one from R. L. Polk Co., for one Medical Directory, \$10.00, making a total of \$26.21. I would ask that a warrant be drawn up for this amount in favor of your chairman.

As chairman of the Publicity Committee, I was able to secure in Sunday issue of August 10th, *Pittsburgh Gazette-Times* a two-column article with illustrations giving an exposition of what Homœopathy is and its founder, and advertising these meetings. There has also been an invitation and application blank in the *HAHNEMANNIAN MONTHLY* for the past three months.

Considering the amount of work expended, the results have been rather meager. Due partly, I believe, to the good work of the committee of last year and the year previous to that.

In concluding my report, I would like to suggest that hereafter it be made a rule by Presidents that the chairman of this committee be made a permanent one.

The names of those presented were referred to the Board of Censors.

The Report of the Committee to Encourage the Study of Homœopathy—no report. A telegram from Dr. J. H. McClelland was read.

The Committee for Combating the Social Evil. Nothing to report.

The delegate to the Interstate Committee of the American Institute of Homœopathy had no report.

The delegate to the American Institute of Homœopathy. No report.

REPORT OF NECROLOGIST.

DAVID JOHN PRICE, M. D.

In the death of Dr. Price, the Shenandoah Medical Society has lost an ardent worker and its vice-president. Dr. Price graduated at the Hahnemann Medical College, Philadelphia, in 1897, and died at his home of cerebral hemorrhage, August 28, 1912. Dr. Price practiced in Shenandoah for many years.

DR. JAMES A. OSBORN.

Dr. Osborn died at his home in Milton, Pa., July 23, 1913.

(Signed) W. F. BAKER, M. D.

The Annual Report of the Superintendent of the Rittersville State Homœopathic Hospital. See later.

Amendments to the By-Laws were next in order. The President read the following amendments to the By-Laws, which had been proposed at the last meeting of the Society: "That in Article VII, Section 1, the word 'five' be changed to 'two'"; and "That Article VIII, Section 1, be altered by striking out

the word 'Gynecology' on line three, and the word 'Obstetrics' on line six, and inserting after the word 'Surgery,' 'Gynecology and Obstetrics.' "

After discussion, on motion, a committee was appointed to report upon the proposed amendment to Article VII, Section 1.

Upon motion, the amendment to Article VIII, Section 1 was adopted.

Doctor Pond proposed an amendment to Article VIII, Section 2: This could not be acted upon until the next annual meeting.

This closed the business part of the morning program.

SECOND DAY—MORNING SESSION.

The meeting was called to order at 10.15 A. M., the President, Dr. Nicholson, in the chair.

The Report of the Board of Censors was presented by Dr. R. T. White, of Pittsburgh, its chairman. The report was as follows:

The five men recommended for membership in this report were elected unanimously.

ANNUAL REPORT OF THE SUPERINTENDENT OF THE HOMŒOPATHIC STATE HOSPITAL, ALLENTOWN, PA.

In accordance with the resolution at the annual meeting of the State Society last year, I hereby present the First Annual Report of the Homœopathic State Hospital for the Insane, Allentown, Pa., to the "Homœopathic Medical Society of the State of Pennsylvania."

The present incumbent was elected to the position of superintendent by the Board of Trustees, February 17, 1912, and took charge of the institution March 25th of the same year.

The first six months were devoted to the furnishing and equipping of the hospital. On account of the criticism which the institution had received in the past, a great deal of time was devoted and much care exercised in the writing of specifications and schedules for furnishings and general equipment. There was therefore some delay necessary to accomplish this and to advertise for bids, award contracts, and allow bidders the time to manufacture and deliver their supplies at the institution as covered in the contracts. The quantities were necessarily large, due to the capacity of the hospital: 1,000 beds for patients, exclusive of accommodations for the administration, staff and employes in general. The institution has been equipped throughout in a simple manner along hygienic and sanitary

lines. The furniture of straight line design is comfortable and pleasing in effect. Every department of the hospital received careful consideration and has been equipped consistent with the appropriation available.

The medical staff has been provided with the most practicable diagnostic appliances covering the various specialties,—the thought being that the individual members of the medical staff should take up one or more of these and be prepared to not only make an intelligent diagnosis, but also to treat the individual patient scientifically from a medical as well as a surgical standpoint. The equipment includes a pathological, bacteriological, chemical and hæmatological laboratory outfits, an up-to-date electrical and X-ray apparatus. The hospital has not only a medical but also a general library,—the latter more particularly for the benefit of the patients.

From an economical standpoint, the mechanical department (such as engineer's and carpenter's) are equipped with appliances so that these departments can do the work and repairs which necessarily arise in the daily routine and growth of an institution of this size. Like attention was paid to the various industries, for example,—the manufacture and repair of clothing, underwear, etc., including a tailoring and shoe department.

Previous to the opening of the institution it was necessary to write specifications and schedules for the supplying of provisions, general supplies, wearing apparel, men's clothing, boots and shoes. This in like manner took up time and occasioned delay. The public in general, however, little realized the amount of work required to bring about the furnishing, equipment and organization of a hospital of this size, and comment was made regarding the seeming delay.

The organization of the hospital received careful consideration, so that only applicants for the various positions (more particularly those of heads of departments) who seemed best fitted in accordance with their experience and qualifications, received appointments.

The amount of work accomplished and the successful operation of the hospital, in its history of less than one year *since* its opening for the reception of patients (namely October 3, 1912) has therefore been due in a great measure to the loyal support of the various heads of departments, more particularly that of the medical and steward's.

The hospital was fortunate in securing the services of Dr. Harry F. Hoffman as assistant superintendent,—a graduate of the Hahnemann Medical College, and prior to his appointment here, senior assistant physician at the Norwich State Hospital, Norwich, Ct.; likewise in the selection of Dr. Walter E. Lang

for the position of senior assistant physician. He also was a Hahnemann graduate and prior to his acceptance of this position was located in Easton and associated with the Easton Sanitarium. The junior assistants,—Dr. Charles S. Trites (a graduate of the Hahnemann Medical College) and Dr. Sarah Adleman (a graduate of the Boston University School of Medicine) received their appointments in December, 1912. In June of this year, Dr. Charles B. Reitz, after graduation from the Hahnemann Medical College, was appointed to take charge of and develop the laboratory.

We have within the past month made arrangements for the services of a dentist to come to the hospital to do such work as may be necessary and advisable,—extracting, filling, cleaning, etc., and when funds of the patient permit, artificial sets. This is important, adding much to the welfare of the patients, resulting in increased comfort in mastication, improvement of appetite and better digestion.

The first transfer of patients was received October 3, 1912. From this date to February 1, 1913, there were admitted to the hospital 820 patients: of this number 750 were transfers. There have been admitted to date a total number of 1,016 patients: of these 553 were men, 483 women. The highest number of patients in the hospital at any one time was 881 during the month of August. We have an admission rate varying from twenty to thirty-five new patients per month.

At the time of the opening of the hospital we were greatly handicapped on account of lack of funds. The 1913 Legislature, however, quickly appreciated our needs. Upon making a request for a special appropriation they made a prompt investigation. As a result the first bill passed during this session was in favor of this institution.

As stated there has been much criticism in the past in regard to the construction of the hospital. The institution is substantially built, the sanitary arrangement is good, the wards are well ventilated and lighted. The chief criticism is the internal arrangement,—the outlay being mostly dormitories and in the main part of large size, with decided absence of single rooms and hydrotherapeutic facilities. It was therefore difficult to classify the patients along twentieth century ideas.

The methods of treatment of the insane within the last decade and a half,—more particularly the last ten years, have indicated a radical change for the better. There is therefore some pardonable excuse for the lay-out of this institution as the plans were made fully a decade ago.

From a standpoint of the hospital grouping, the insane now in public institutions should be classified under three main di-

visions. First: the acute and curable, for whom a strictly hospital care is advocated. Second: The chronic insane, who require strict supervision and confinement for the protection of themselves and the public,—the so-called asylum class. Third: The chronic, but able-bodied, harmless insane, who are either competent or may be taught to do some useful work to aid in their support, allowed a larger liberty and placed under surroundings more home-like than would be advisable for the first two classes, and which is designated as the colony group. With the present arrangement of this institution such a grouping is impossible. An attempt has been made to classify our patients that the newly-admitted ones receive careful study and classification in order that the mental identity may not be lost amid the general throng: in other words, it is our desire to give special attention to cases in which the prognosis seems hopeful for either improvement or restoration to normal mental health. From personal experience I know that the most serious drawbacks in the care and management of the insane are inadequate accommodations for reception and proper classification of patients, and lack of facilities in carrying out "hospital treatment" of the newly-admitted cases, especially those of the so-called "recoverable" type. We have endeavored to keep this fact in mind and our patients have been classified so as not to lose sight of this type and to give all new admissions individual study, consideration, care and attention.

The medical work is therefore being carried on as far as practicable along general hospital lines; each case receiving a thorough mental and physical examination immediately after admission,—the latter always including examination of the urine,—and when indicated, of the blood and other secretions and excretions. An effort is made to obtain full family and personal history of each patient, including onset and previous status: in this way securing a complete record of the patient to the time of entering. This is augmented by frequent case notes made at regular intervals and thus the history is complete from the time of the onset of the psychosis to the day of discharge from the institution.

Our duty, to my mind, does not end with the mere furlough or discharge of patients. Eventually, we should have in the employ of the hospital a combination field and social worker to assist in obtaining complete family and personal histories, to follow the progress of patients in their homes after leaving the hospital, to study their environment and advise such changes in occupation and recreation as may be considered best for their welfare. This social worker should also instruct the family, and bring about the patient's prompt return to the hospital if

not doing well. Such a worker can accomplish as much good for the mentally sick as is being done in connection with civil hospitals in our large centres of population.

Staff meetings are held almost daily at which the new admissions are presented for diagnosis, examination and discussion as regards treatment and prognosis of the individual patient. These meetings are not only a benefit to the patient who receives the best judgment of the medical officers, but also to the officers themselves from the examination and discussion of the cases. Patients who are to be considered for discharge, or for thirty or sixty day furlough, are also presented at these meetings and the patient examined, his case thoroughly discussed and final decision rendered. Each week one session is devoted to the review and study of the current medical literature,—both general and special. The hospital subscribes for the leading journals and these are assigned to the individual members of the medical staff to summarize.

In the care and treatment of the acute and curable cases, the question should always be how well they can be cared for, not how economically can such cases be treated. On account of the majority of admissions showing defective nutrition (due to the constant diminution of activity in the process of digestion) most of the patients are more or less emaciated and physically exhausted. We, therefore, prescribe a preliminary course consisting of rest in bed in duration from one to four weeks to three months and even longer, and treating them as sick from the onset: in this way employing the most usual means of suggesting and securing bodily and mental rest. With the assistance of the nurses we are able to make regular observations of temperature, pulse, respiration, action of the bowels, condition of the urine, amount of sleep, changes in weight, mental condition and such other data as will aid in the diagnosis and treatment of the individual patient. Mechanical, drug or chemical restraint is dispensed with,—although the former has been used in a few surgical cases. For the disturbed patient hydrotherapy in the form of prolonged neutral tub baths, or warm packs, has been found vastly beneficial and a most satisfactory sedative,—doing away with the use of restraint, either mechanical or drug. In conjunction with rest in bed, an ample supply of fresh air, nutritious food, hydrotherapy, personal attention and influence, beside suggestion and re-education, the indicated “homœopathic single remedy” is prescribed.

From our comparatively short experience in connection with this hospital, we are convinced there is a foolish prejudice in the lay mind (in this section of the state) against institutions for those mentally sick. On this account relatives of a patient

delay proper treatment until the case becomes serious, even dangerous, and prognosis unfavorable for restoration to normal mental balance. The hospital very often is a last resort and is used under more or less compulsory circumstances. Many patients when brought to the institution show a duration of from one to five years or even longer. The family physician will from time to time find incipient cases in his daily practice. He should be in position to note any departure from normal health and when such a condition is observed should immediately give advice recommending hospital or sanatorium treatment.

There has been an important advance in hospital management by the recognition of the value of occupation and diversion as a therapeutic agent in the treatment of our patients. Work upon the wards, in the dining room, kitchen, laundry and sewing room and upon the farm and grounds of the institution affords employment to many of our patients. There is, however, a large percentage of them who are inclined to sit in a listless, indifferent, apathetic manner: and still others who are too turbulent to be employed in the above-mentioned manner. When it is possible to engage such patients in some form of occupation, it often brings about both a mental and physical improvement especially in those who have shown interest in nothing, and quiet in those who have been mischievous and destructive. In view of this, an industrial worker (a graduate of the Pratt Institute,—Normal Art Training course,—also Cooper Union and New York School of Art) has been employed to devote her entire time to the instruction of and the amusement of patients.

Much work has been accomplished (by able bodied men patients) about the farm during the spring and summer months. On account of the difficulty in obtaining satisfactory help, without their assistance comparatively little would have been accomplished. We also succeeded in doing a great deal during the winter months,—such as the clearing of under-brush, cutting down dead and decayed trees: during the spring and summer, clearing fields and old fences of rock, stone and brush,—thus making a beginning towards the general landscape of the grounds.

With the organization of the hospital, it was planned to establish a training school for nurses and this was accomplished February 27, 1913. Much benefit is derived in the care and treatment of patients by a properly conducted training school. Unfortunately, however, the roster of nurses and attendants in state hospitals is a very changeable one, and as a result the classes dwindle very rapidly and not as much is accomplished

in this way as would be if those who seek employment in our institutions showed more stability. Every effort has been made to make the hours and conditions as good as in any other of the institutions of this State. With it all, there have been many changes especially among the men.

State hospitals which are progressive and keep abreast with the times are never complete. There is always a demand for greater capacity and in order to bring about proper classification it is necessary to add from time to time new buildings with modern facilities for treatment. We appreciate the fact that the 1913 Legislature recognized our needs and that His Excellency, Governor Tener, approved our bill for improvements and new buildings as much as was consistent with funds available. We received an appropriation for the following: Reception building for new admissions, two buildings for tubercular patients, isolation cottage for contagious diseases, two homes for nurses, cow barn, piggery, changes in buildings for bathing and hydrotherapy, ventilation of tunnel, additional laundry equipment, farm building repairs, and tramway from railroad to power house.

I am grateful to the physicians of the community and State for their interest in the institution: but above all, to the trustees as a board and to the individual members for their considerate support, confidence expressed, and encouragement in the discharge of my duties.

Respectfully submitted,

HENRY I. KLOPP, *Superintendent.*

August 30, 1913.

Dr. Pond then made a motion that this report be referred for publication. The motion was seconded and carried.

The report of the Committee to Consider the President's Address was presented by Dr. J. M. Heimbach, and upon motion was accepted.

It was moved and seconded that this report be accepted. Carried.

The Committee to Audit the Books of the Treasurer was presented by Dr. H. B. Bryson, who stated that the books of the Treasurer had been found correct. This report was accepted.

The report of the Board of Trustees was presented by Dr. William M. Hillegas, and upon motion was accepted.

Upon motion of Dr. H. F. Schantz, fifty dollars was donated to the International Propaganda Committee of the American Institute of Homœopathy, then acting in conjunction with Dr. Hoyle of London.

Dr. J. D. Elliott, of Philadelphia, read a letter in regard to

the care of the grave of Dr. Dudley, formerly Dean of the Hahnemann Medical College, of Philadelphia. Upon motion the Society voted \$40 for the monument of Dr. Pemberton Dudley.

At eleven o'clock the Society proceeded to the business of nominating officers for the ensuing year. The following nominations were made:

President, Leon T. Ashcraft, M. D., Philadelphia, Pa.

First Vice-President, J. M. Heimbach, Kane, Pa.

Second Vice-President, H. M. Gay, Philadelphia, Pa.

Secretary, J. D. Metzger, Tyrone, Pa.

Treasurer, Ella D. Goff, Pittsburgh, Pa.

Board of Censors, Edward Crusen, M. D., Norristown (filling place of W. T. Edmunds).

Trustees: D. P. Maddux, Chester, Pa.; H. B. Bryson, M. D., Pittsburgh, Pa.; J. R. Schantz, M. D., Reading, Pa.

Associate Editor of HAHNEMANNIAN MONTHLY, Gilbert J. Palen, M. D., Philadelphia, Pa.

Necrologist, Dr. W. F. Baker, Philadelphia, Pa.

Thursday morning, 9 A. M., September 4, 1913, the above officers were elected.

At 12 o'clock, the Secretary read the report of the Board of Censors and the report of the Committee on Amendment to Article VII, Section I, which were accepted and adopted.

Dr. Pond moved a vote of thanks be given to the President, Dr. H. S. Nicholson, for his care of the Society during the year, and for presiding at the various meetings. This motion was unanimously carried.

Doctor Nicholson moved a vote of thanks be extended to the retiring Secretary for his most faithful services to the Society. This motion was unanimously carried.

TRILLIUM PENDULUM.—Shooting pains through the chest; symptoms of cold in the chest; aching of the muscles in general, as if from exposure to cold and dampness. Violent cramp-like pain at the end of the sternum, very severe and continuous for some days; later as it become better, a sensation of pressure and squeezing remain, with some difficulty in breathing because of it; cramp-like pains in various parts of the body; worse at night. Variable symptoms in other provers counted out. These appeared to be constant.

PELLAGRA: A SHORT RESUME OF ITS HISTORY, WITH REPORT OF A CASE.

BY

RALPH BERNSTEIN, M. D., PHILADELPHIA.

Clinical Professor of Dermatology, Hahnemann Medical College and Hospital, Philadelphia.

A SPORADIC case of pellagra had been sent to the Crozer Homœopathic Hospital and Home for Incurables, of Chester, Pa., by Dr. J. P. Van Keuren, and the writer, as consulting dermatologist to the institution, was called in to see the case, to either confirm or reject the diagnosis. The diagnosis of pellagra was confirmed.

The rarity of the disease in this section of the country is the writer's excuse for presenting the case and giving a short outline of its history and presumed causal factors.

EARLY HISTORY OF PELLAGRA.

As early as 1762, Gaspar Casal gave the name of "Mal de la Rosa" to a disease which had existed in Spain since 1730, which is now known as pellagra.

Pellagra is especially endemic in southern Europe, particularly in the northern parts of Italy; also in Egypt and Mexico. Pellagra was first noted in the United States as early as 1863. Much interest has been taken by the health officials of the United States Government of recent years in making a study of pellagra and its causes, especially so since numerous cases have presented themselves in our southern States, particularly in Alabama, Georgia, North and South Carolina. It is practically estimated that there are about one thousand cases at present in various portions of the Union, showing why the Government is so anxious to find efficient means to bring about successful methods of exterminating pellagra from this country.

CAUSE OF PELLAGRA.

There is much controversial opinion among scientific investigators of pellagra as to whether it is really due to ingestion of diseased maize or corn, which theory was so energetically expounded by Lombroso, of Turin; or whether it is due to a proto-

zoan which is presumed to be transmitted by a sand-fly (simulium), which theory has been brought forth by Sambon and others.

Pellagra is not contagious, nor is it hereditary, being demonstrated by the fact that infected persons in non-infected localities do not cause a spread of the disease; and its non-hereditary tendency being demonstrated by the fact that children who are born in infected localities may develop the disease, whereas children born from the same parents after removal to a location in which there is no pellagra do not become pellagrous.

Pellagra is a chronic, endemic disease which is of a constitutional nature, affecting the skin and the cerebro-spinal and digestive systems.

The disease is always better in the fall and winter, usually having its beginning in the spring months. It has its onset with mental depression, headaches, general weakness, and joint and bone pains. There is then followed a chain of symptoms affecting the entire gastro-intestinal tract. This stage is followed by the skin manifestations, which are of important diagnostic value, especially so because of the fact that the backs of the hands or those portions which are exposed to the sun are affected; the backs of the hands at first showing a decided reddening not unlike sunburn, which later on assumes a sort of a chocolate color with thickening and hardening of the skin, followed by brown pigmentation and peeling.

The skin eruption is peculiar in that it never affects one side of the body, but always both sides, being definitely outlined—separated from the well skin by a sharp margin known as the “pellagrous collar.”

It is quite possible that the actinic effect of the sun's rays may have some decided influence upon the disease since only the uncovered portions of the body are affected with the skin eruption; in this country being limited to the face, neck and hands, whereas, among the Egyptians entire portions of the body which are exposed are usually attacked.

After several attacks of pellagra marked weakness overcomes the patient, which is followed with intestinal symptoms, and finally those of delirium, resulting in death.

It is difficult for the physicians at Chester who have made a study of this case, consisting of Drs. Daniel P. Maddux, Franklin Powel and J. P. Van Keuren, who are members of

the Crozer Hospital staff, to account for the presence of pellagra in Chester, particularly so because the patient in question has always been a resident of Chester, has not been in Southern States where pellagra is decidedly prevalent, and has not partaken of maize or corn products, so that the sporadic nature of the case has caused considerable interest.

DERMATOLOGIC REPORT.

Case No.

Name

Diagnosis: Pellagra.

From the dermatologic standpoint this case presents a typical picture of pellagra. The skin lesions, presenting themselves upon the backs of the hands, are quite characteristic of this disease because pellagrous skin eruptions are only to be seen upon those areas which are exposed to the light, the backs of the hands being the most common site of predilection.

The skin manifestations of pellagra, as in this case, are decidedly bilateral, never unilateral. The skin lesions primarily manifested themselves as a dull red erythema likened unto sunburn, gradually deepening into a brownish-red with slight thickening with roughening, and now showing desquamation; a characteristic feature of this condition being that is known as the "pellagrous collar," showing a definite line of demarkation between the affected and unaffected portions of the skin.

The skin manifestations taken together with the nervous symptoms of exaggerated reflexes, melancholia with mental depression, psychic irritability and hallucinations, together with a chain of gastro-intestinal symptoms, namely, those of a red-den tongue with prominent papillae, marked salivation with stomatitis and co-associated diarrhœa, make the picture of pellagra complete.

EDITORIAL

THE RADIUM HYSTERIA.

PROBABLY no greater example of the hysterical tendencies of the American public can be cited than the "tempest in a teapot" that is now being enacted in Washington in regard to the question of radium. Commissions have been appointed by Congress, resolutions are being enacted by business men's clubs and Chambers of Commerce all over the country, newspapers are devoting columns and actually entire pages to the subject, and it was stated by Mr. J. F. Flannery recently, before the House Committee in Washington, that one of our multi-millionaires was contemplating the erection of twenty hospitals throughout the country for the treatment of cancer by radium, at a cost of fifteen million dollars.

To one who will disregard the popular clamor and turmoil over the new idol that has been set up and carefully investigate the facts of the case, it is truly remarkable how little of actual truth is back of all this clamor and discussion. In fact it would truly seem that it is largely the result of the work of some clever advertising agent.

As far as we have been able to learn from accredited sources, a few cases of malignant and benign growths located on the skin or mucous membrane, have been apparently cured by the use of radium. By far the majority of the reports end up with the statement that "a certain number of the patients treated were improved," and the optimistic investigator usually takes the trouble to add that they hope some of them will remain cured.

We are not aware that any one has offered any conclusive evidence that even in the treatment of superficial growths, radium has proved to be superior to excision by the knife or the application of the X-rays, or to the use of freezing by carbon dioxide snow.

Dr. Howard A. Kelly, the head of the National Radium Institute, probably the most eminent and most enthusiastic advocate of radium in this country has, we are informed, been

summoned before a committee of the medical and surgical faculty of Maryland, of which he is a member, to explain his method of giving publicity to the radium treatment. We know very little of what Dr. Kelly has actually accomplished by the use of radium, and therefore cannot pass any judgment upon the character of his statements in regard to the value of this agent. When we read, however, in apparently authentic newspaper reports, that Dr. Kelly announced in a recent public meeting that the prophet Malachi foretold the discovery and uses of radium more than two thousand years ago, and that the proof of such assertion lies in a verse taken from the writings of that prophet to the effect that "The son of righteousness shall arise with healing in his wings," we are inclined to question whether the judgment of Dr. Kelly is such as to warrant us in placing the fullest confidence in his deductions. We at least hope that his reasons for believing that radium is a valuable agent in the treatment of cancer, are more convincing than his method of proving that the prophet Malachi possessed a knowledge of the discovery or uses of radium.

We sincerely trust that if any American philanthropist has fifteen million dollars to spend, he will invest in some of the old, well-proven methods of alleviating suffering, or at least will wait until the hysterical enthusiasm over this new agent has subsided and the scientific men of the medical profession have had an opportunity to determine definitely whether it possesses any properties that prove it superior to the present methods of treating malignant growths of the skin and mucous membranes.

G. H. W.

THE EARLY RECOGNITION OF CANCER OF THE STOMACH.

It may truthfully be said that the early recognition of cancer of the stomach is positively essential to successful surgical procedures in the management of this serious and distressing condition. A great deal of attention has been given to this subject by surgeons and internists during the past decade and innumerable tests have been devised whereby the presence of gastric cancer might be definitely established before waiting for the development of a palpable tumor.

Salkowski believed that he had solved the problem by determining the amount of colloidal nitrogen in the urine. The

detection of hemolysin in the gastric contents was brought forward by another clinician as a means of recognizing the presence of this disease and a number of laboratory workers have commented enthusiastically on the significance of the glycyltryptophan and tryptophan tests.

Unfortunately, none of these "positive tests" have established their practical usefulness at the bedside, and the fact remains that to-day we are dependent upon a careful study of the clinical symptoms and the ordinary methods of gastric analysis, combined with radiographic studies, for the recognition of gastric cancer. We are often brought face to face with a complex of symptoms that suggests the possibility of cancer, and yet, the most careful study fails to give us any positive proof of its existence. It is easy to suspect cancer, but to prove its existence prior to the development of a palpable tumor or of the signs of obstruction, is difficult or impossible. Some "progressive" surgeons have solved this difficulty by advising that every patient suffering with symptoms of indigestion of more than six weeks' duration should have his abdomen opened for exploratory purposes. Many of the advocates of this procedure seem surprised to learn that the laity do not take kindly to the idea and that there are those who object to having their abdominal cavity opened upon mere suspicion.

Seriously, we do not believe that any conscientious physician should be willing to endorse such advice. We recall but few people who have lived many years without having been troubled with symptoms of indigestion at times, and if such a rule were actually followed it is probable that but a few individuals would reach the age of twenty-one without having undergone one or more abdominal sections.

When all has been said and done the fact remains that, in the light of our present day knowledge, the best we can do is to regard with suspicion all cases of persistent dyspepsia occurring in individuals past forty-five years of age who have not previously suffered from gastric trouble. If such dyspepsia is attended by loss of weight, careful analyses should be made of the gastric content and one or more radiographic examinations should be carried out. Should the result of these studies confirm the suspicion of gastric cancer, we are then in a position to advise an exploratory laparotomy on a rational basis. Such exploration, however, should never be made until all other available means of diagnosis have been exhausted and

should be looked upon as a last resort rather than a quick and ready method of diagnosis.

We are thoroughly convinced that the *rational* employment of exploratory surgery will accomplish more in establishing its true value in these cases than the reckless use of the knife as advocated by many enthusiasts whose experience is so limited as to render it of very little importance.

G. H. W.

ETIOLOGY AND TREATMENT OF UTERINE HEMORRHAGES. Hirsch (Charlottenburg) has written an article of the greatest importance for gynecologists, and especially for those who are giving some attention to the pathological histology of their subject, for whom gynecology is not alone an art but a science; and especially for those who have some knowledge of the homœopathic action of drugs. The great activity recently displayed in the histological studies of the endometrium, and of the processes of menstruation and other uterine discharges, have brought about an entire change in our concept of the whole subject. Studies of the cyclic changes of the endometrium in menstruation have pointed away from it for an explanation of uterine hemorrhages. The vessels of the uterus were then studied; the results being insufficient, the myometrium received attention. Here again varying pictures and inconstant findings pointed to something beyond: to the ovaries, of course. But the ovarian lesions varied, were inconstant, inadequate. And so Hirsch says two components are required for the establishment of a uterine hemorrhage: (1) a hyperæmia which involves not only the uterus, but its surroundings, and in a wider sense the pelvis. (2) an inadequate power of the uterine musculature, so that it is not capable of contracting as strongly as is necessary to drive the blood through the venous channels to the heart. Now if this be true, and if the splendid laboratory work has received a proper interpretation, it would appear that we are directed once more to therapeutics, to drugs, to hygiene, and to all that goes to make up the proper management of illness. Then there pass in review the splendid array of homœopathic remedies which have won their laurels in actual tests. Of course, Hirsch does not say anything about this; he has shown how local injections of preparations of ergot have accomplished the desired relief. Another author elsewhere abstracted has shown how pituitrin is a better preparation because less violent and less painful. In all of this let us not forget that atypical uterine hemorrhages constitutes a condition not to be dallied with; that an accurate diagnosis is demanded; mainly because it constitutes one of the early stages of malignant disease. Hirsch's article appears in *Monatsschr. f. Geb. u. Gyn.* Vol. 37, 420.

THEODORE J. GRAMM, M. D.

GLEANINGS

INFANT FEEDING.—In a paper on "Some Observations on Infant Feeding" in the October number of *Archives of Pediatrics*, Harry Rulison, M. D., of Albany, N. Y., says that "the chief requisite for successful substitute feeding is a thorough knowledge of the underlying principles; the nutritional value of the food mixture as a whole and of each individual element entering into its composition; the nutritional requirement of the child to be fed, and the correct interpretation of the various signs of nutritional disturbances, together with the ability to refer them to the particular food element causing that disturbance. The failure to make such interpretations correctly is the chief cause of unsuccessful feeding.

The food should be of such a caloric value as to meet the demands of the individual child. Its component elements, moreover, must be present in such proportions as to constitute a well balanced ration, within certain limits, which will depend largely on the metabolic status of the infant for whom it is intended. Its composition need not approximate breast milk nor necessarily resemble it closely. It should be flexible and capable of easy modification to meet changes in the infant's condition. Its preparation in the home should be possible."

Dr. Rulison has found that these conditions are fulfilled by a food consisting of dilutions of whole milk with water, to which is added from one to three carbohydrates, including at least one form of sugar. He does not mean to imply that all infants will thrive on such a mixture, but that it is the best and simplest method of substitute feeding for the average infant.

He does not think that the average bottle-fed infant is overfed as a great many believe. He says that "It is not at all infrequent to see a diagnosis of overfeeding made by the physician in the case of the child passing small, frequent, starvation stools and crying from hunger." In general, he is in favor of larger quantities of food at a feeding and longer intervals, with plenty of water between feedings. Night feedings should be discontinued as soon as possible.

For the past two years he has been able to begin feeding with mixtures containing from 1.33 to 2.00 per cent. proteid, increasing to 3 or 4 per cent., at the end of the first year, with uniformly better results than formerly, when lower percentages were used. During this time he has not seen a casein curd and he believes they occur much more frequently when the fat exceeds the proteid than when it is equal or less. Moreover, colic has been a very infrequent symptom, and his experience has been that much of the so-called colic is hunger and the symptoms have disappeared promptly on increasing the strength of the formula. He uses cane sugar with better results than when lactose is used. Although, in cases of dyspepsia, acute intoxication and atrophy, he believes maltose is a safer su-

gar to use. During the course of a diarrhœa, sugar should be withdrawn, and he finds that even barley water had better be omitted during this period. Weak tea or saccharine water is preferable. In regard to whey salts, he says they should not be used in conditions such as dyspepsia, acute intoxication, atrophy and spasmophilia. On the other hand he has seen an infant suffering from marasmus, gain four pounds in fourteen days without signs of edema, upon a change from *eiveissmilch* to skim milk being made, a gain due principally to the increased water retention occasioned by supplying more whey salts.

The routine use of lime water in food mixtures is a bad practice.

He says in regard to fats: "There can be no doubt that many infants cannot metabolize properly even moderate percentages of fat. Experience in feeding whole milk dilutions has taught one that the fat in a mixture will more often need reduction than increase after it exceeded two per cent. Many infants make phenomenal gains on buttermilk and skimmed milk without developing symptoms of rachitis or any apparent lessening of the immunity.

He sums up his paper with the following remarks: "In closing, I wish to say just a word concerning the proprietary infant foods. Much of the condemnation which this class of products has suffered in the past has been undeserved. Many of them, especially the malt preparations, are exceedingly valuable. They should not, however, be used in a hit or miss fashion. The physician should inform himself as to the composition of the food to be used, the caloric value of a given amount and the indications for the use precisely as would be done if a new drug were to be administered. The directions on the package are best ignored, as it is impossible to make them apply to more than a small percentage of children. If one has a thorough knowledge of what is now known concerning the underlying principles of infant feeding, rules and methods need no longer be laid down, for each case will suggest the method or the rule by which it should be governed.

POST-OPERATIVE ACUTE DILATATION OF THE STOMACH.—Ruth, Des Moines, Iowa, has made an exhaustive study of this subject from cases reported. He says the condition is by no means rare, but is probably quite as frequently met with by the general practitioner as by the surgeon and may occur as a complication more grave than the original malady, in all forms of injuries, after nervous shock of various kinds, in all acute infections, prolonged and debilitating diseases, as well as acute indigestion, and at any age and without sex preference. Under the conditions attending operations and the post-operative period such a quantity of gas or fluid may accumulate in the stomach as to distend the stomach and displace all the intestines downward, while the stomach occupies the entire abdomen, interferes with the heart's action by upward pressure and may produce rapid death or grave symptoms without any real obstruction either at the cardia, pylorus, or in the upper intestinal tract. The secretions are decidedly irritant and even corrosive to the gastric mucosa, and reinforced by the irritating properties of the anaesthetic, now also being eliminated by way of the stomach, a powerful exosmosis sets in which in some cases rapidly draws all the available fluids from the body into the stomach.

Suitable preparation of the patient before operation is urged. Undigestible food should be withheld especially such as may undergo fermentation and form large quantities of gas or produce toxemia. It is necessary to avoid too profound and prolonged anaesthesia. The utmost care must be taken to minimize operative trauma and pressure or adhesive irritation to the solar plexus from drains used in the upper abdomen. Frequent changes must be made in the patient's position to one side or the other, to facilitate the passage of gas or liquids and at the same time the danger of slight gastric distention will be reduced. The operation must be completed in the shortest possible time to reduce to the minimum the period during which the vomiting center is paralyzed by the anaesthetic. Exposure of the abdominal viscera must be as slight as possible. Especially dangerous is much handling, air contact and friction of all kinds, but particularly wiping the abdominal viscera with gauze. Active treatment consists in immediate emptying of the stomach by the tube followed by lavage until the fluid returns clear, and this must be done as soon as there is stomach distention, tympanitic or dull, with or without pain, nausea, vomiting, regurgitation of fluid or belching of gas, and without waiting for the pulse to be greatly increased in frequency or lessened in force, respiration embarrassed, cyanosis to be extreme or the thirst to be of the agonizing, torturing kind. The use of the tube and lavage should be repeated as often as these symptoms return.—*Amer. Jr. Obs.* Vol. 67—525.

THEODORE J. GRAMM, M. D.

PITUITARY EXTRACT IN UTERINE INERTIA.—Edgar's (New York) conclusions regarding the use of pituitary extract are in part as follows: Ampules or vaporales of the drug should alone be employed, since the action of the extract in bulk is uncertain. Three reliable proprietary preparations of the drug are now obtainable. For decided action, 0.4 gram of the drug is usually called for, although in ordinary cases, with little obstruction, half that dose is sufficient. Repetition of the dose is often called for since its effect lasts but thirty minutes. No toxic symptoms are observed from the drug even in maximum doses. The drug has no place in normal labor and its use should be confined to primary and secondary inertia, to post partum hemorrhage and Cæsarian section, in the last as a substitute for ergot. Full and even small doses of the drug in the first stage of labor have caused fatal compression of the fetus, premature separation of the placenta and deep rupture of the cervix. In nineteen cases of post partum hemorrhage due to inertia the results were disappointing because its action was unreliable and not as positive as the ergot preparations. In induction of labor the drug failed to initiate contractions, but apparently initiated them after the use of gauze, the bougie or hydrostatic bag. The author believes the drug strengthened already existing contractions not yet apparent to patient or physician. In primary inertia in abortion cases the results were disappointing, as also in atony of the bowels and bladder and as a galactagogue. The indiscriminate use is dangerous to mother and child in primary or secondary inertia of the first and second stages of labor. Before full dilatation or dilatability of the cervix the use of this extract is equivalent to that of ergot at this time. It is then probably more harmful than ergot because of the more powerful contractions in-

duced and the uncertainty of action. The action of the drug is most uncertain. One can never predict in a given case, either from the amount of the drug administered, or from the character of inertia and the obstruction to be overcome how powerfully the drug will act upon the uterus. In some instances after the use of half the dose rupture was imminent and anaesthesia was required to control the action of the drug. The author believes the drug should never be employed for inertia in any stage of labor, unless an anaesthetic is at hand for immediate use, and preparations complete for immediate operative delivery if necessary, to avoid uterine rupture.—*Amer. Jr. Obs. Vol. 68—20.*

THEODORE J. GRAMM, M. D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

TUBERCULOSIS AND ITS HOMOEOPATHIC THERAPY.—Before a recent meeting of the Ohio Homœopathic Medical Society, Dr. W. A. Dewey, of Ann Harbor, read an elaborate paper dealing with the “therapeutics of the tuberculins.” As Dr. Dewey points out, it is a very long cry, indeed, from the day of Robert Fludd to that of our own era, and yet it was the same Robert Fludd, who in 1638, advised the use of the sputum of a tuberculous subject, properly prepared, for the cure of phthisis or *a wasting of the bodily frame* as it was then known. Since this early period, however, a great amount of research has been put forth on the “therapeutics of the tuberculins.” Constantine Hering avowed that if he had to choose between isopathic remedies, he would place in the front rank phthisine in case of tuberculosis. This, from Hering, in 1838, some five years before Robert Koch saw the light of day, is assuredly deserving of more than a casual notice. Later, Martina, a homœopathic physician of Rio de Janeiro, (who died in 1854) advised tubercina, but it was not until the year 1877 that the first real mention of tuberculinum was made—and that by Dr. Samuel Swan, of New York.

This preparation of Swan was made from the expectoration of a tuberculous patient, the same being triturated with sugar of milk. With this remedy Swan cured a case of tuberculosis in four weeks. This happened just fourteen years before the discoveries of Robert Koch. Many cases of tuberculosis were treated subsequently by Dr. Swan and his associate, Dr. Biegler, with tuberculinum, and Dr. Dewey himself used tuberculinum in the consumptive wards at the Ward’s Island Homœopathic Hospital in 1880. Many of the latter’s cases showed improvement. The preparations

used were the potencies of Swan, which although notated as excessively high, did not exceed the 100th potency according to the scale of Hahnemann. In the reading of his paper Dr. Dewey subsequently dealt more or less intimately with the several preparations which have come to be used in the treatment of diseased tuberculous states. An excellent resume is given of Burnett's bacillinum, Koch's old and new product, the tubercular filtrated Bouillon of Denys, Marmoreck's diluted serum, tuberculin avaire, and on the bacillary emulsion. Considering the above, *ad scriatum*, Dr. Dewey has this to state as regards their approved valuation:

Bacillinum. Dr. J. Compton Burnett, of London, was the originator of bacillinum, which he prepared by triturating a portion of the lung, together with the contents of a cavity, its walls and its surrounding tissues which thus contained bacteriæ of various kinds as well as tubercles of all kinds and of all degrees. Compton Burnett also laid down some rules directly bearing upon the use of his preparation. *Rule 1.* The virus should be given by the mouth in high dynamization; never below the 30th, and if constitutional disturbances are feared, never above the 100th. Low dynamization should not be used. *Rule 2.* The dose should not be too frequently repeated. *Rule 3.* There is a certain stage (Burnett thought) when it will not cure. He was unable to determine this stage, as he considered it dependent on the degree of intensity. Burnett's bacillinum succeeds better in acute cases, its action being rapid. It is most useful in simple non-complicated cases of tuberculosis not too far advanced. It is very valuable in the relief and cure of alarming and painful signs such as cough, night sweats and fever. Burnett's bacillinum is a superior medicine in muco-purulent catarrh. Besides the tubercle bacilli many other organisms are contained in the preparation. In acute bronchitis it seems very applicable. Nash advises it for persons who have a predisposition to take cold, while Cartier believes, and rightly so, that it is quite as useful in non-tubercular as in tubercular affections.

Dewey considers it an excellent remedy in delayed resolution in pneumonia.

Tuberculin of Koch (Old) is a laboratory product. In 1891 Robert Koch demonstrated in the laboratory the possibility of curing tuberculosis by tuberculinum, but his discovery failed to make good because first of excessive dosage, and second the failure of the author to comprehend that there could never be a single remedy for every case of the disease. This remedy is recommended by G. Harlan Wells in the treatment of tuberculosis and he uses it hypodermically, commencing with the 6th potency.

Tuberculin of Koch (new T. R.). This differs from the old tuberculin because there is less tendency to febrile reaction. Jæger, of Hildesheim, uses it in the 6th or 7th decimal and by the mouth. J. Heber Smith recommended this preparation in broncho-pneumonia.

Bacillary Emulsion. This is pulverized bacilli in glycerinated water. Hallock has good results with it where the patient is non-febrile and in general good condition.

Tubercular Filtrated Bouillon of Denys (B. F.). This is a glycerin bouillon in which tubercle bacilli have grown, the bacilli having been removed by filtration. It contains no preserving chemicals, which is important, as frequently serums contain more of the preservative than of the alleged therapeutic agent. This is a preparation often used by homœopathic

prescribers. Both Humeau and Ravet, of Havre, have employed this tuberculin in homœopathic doses, both by hypodermic injections and by the mouth. The initial dose is the 9th, 12th, or 15th dynamization; as soon as the reaction appears, the drug must be suspended. In a series of forty cases, Dr. Jousset used Denys Bouillon in the 6th, 10th and 12th decimal potentization and obtained excellent results, while Dr. Cartier uses the remedy in higher potency and very effectively. Apropos to this remedy Dr. Cartier says, "I have many times arrested temporarily the evolution of a tuberculosis of a progressive case, characterised by fever, incessant cough, abundant expectoration and anorexia with high dilutions." Dr. Cartier follows the rule of not repeating the dose so long as improvement continues. Many other observers have successfully used the tuberculin of Denys in high potencies successfully. It is probably the safest of all the bacteriological methods and the nearest approach to homœopathy in technique.

Marmoreck's Diluted Serum. This is an anti-tubercular serum and its use according to the directions of the author has been unsatisfactory. But employed in the 6th, 10th or 30th centesimal potencies, it has succeeded well in the hands of Dr. Leon Vannier, of Paris, who tried it in 530 cases, having incipient tubercular manifestations. In many cases a slight aggravation gave way to a progressive amelioration. It has been used successfully in bone tuberculosis, abdominal and meningeal tuberculosis.

Bovine Tuberculin. This is prepared in London by Epps and Nelson. Moir and Hey think it gives the best results in ordinary human tuberculosis. Dr. Ord thinks it especially useful in the 30th potency in those cases treated by the old tuberculin in frequent cases, and when the tuberculosis is stationary. When the tuberculosis is stationary, Bishop recommends a change from human to bovine tuberculin.

Tuberculin Avaire. The tuberculin of birds was tried by Dr. Pierre Jousset, some twenty years ago in human tuberculosis, in which he obtained no appreciable results. Dr. Cartier insists on the value of this form in non-tubercular diseases of the respiratory apparatus. It is indicated in troubles where the symptoms go on even to a broncho-pneumonia. Charles E. Wheeler, of London, prefers avaire in exacerbations of chronic pulmonary affections with profuse expectoration.

IGNATIA.—*Translation from the French of Dr. Leon Vannier.*—(The following is taken from the monthly review of *L'Homœopathie Française* and is a communication from the *Directeur*, M. le Dr. Leon Vannier.)

Characteristics.—Ignatia has nervous manifestations, in children and in women, of which changeability, inconstancy, and a paradoxical and contradictory disposition calls for this drug.

Modalities.—Aggravation is induced by chagrin, the emotions, cold, contact, strong odors, powerful pressure, in walking and in swallowing.

Type of Ignatia.—Nervous temperament, the female sex, sensitive, easily excited, and Dr. Vannier is of opinion that typically such persons have dark hair and dark skins. A gentle disposition, active in perception, rapid in execution, but of a changeable disposition. A type with a pallid countenance and sickly; troubled and convulsed when she reflects concerning her disordered impressions.

Nervous System.—(a) Mental depression, occasioned by disappointment or by a considerable nervous exhaustion. There is a resultant excitability and an intense impressionability. Ignatia is hence called for in exaggerated emotional states. Nervous troubles following upon disappointment and chagrin, ill news, vexations and contrarities. Melancholy and sadness. A disposition to grieve in silence. The sick one desires to be alone with her sorrow, she sighs frequently and is sorrowful and worn out. In a word, *those persons mentally and physically sapped by a constant intensified strain of some sort.* Involuntary sighing, with a sensation of weakness, and a *gone* feeling at the pit of the stomach, not in any way relieved by eating. A sensible humor. Lovable, if in a good mood, but easily troubled by the least emotion. The slightest reproach or the least contradiction excites a fit of rage and makes the patient angry against herself. A wrangling and impatient disposition. Evil effects of rage. The humour of the patient is changeable and inconstant. A change of humour in an incredibly short time; it passes from joy to sadness and from laughter to tears. Each judgment is lacking in mental poise and equilibrium. Thinks he has neglected some duty. Spasms and convulsions after fright, or subsequent to reprimand and correction. Violent convulsions, tetanic, after loss of consciousness by fright or chagrin. Generalized or partial chorea, from disappointment or dentition. Tremblings. Temporary paralyses and those of an hysterical nature.

(b) *Sensibility.*—*Extremely sensible to pain.* In this connection pains are either (1) active, (2) in small and strictly limited areas, (3) recurring at the same time and in the same fashion, (4) pains of a wandering character.

Head.—Congestive headache, pressive, tearing, and generally on one side. *Hemicrania, with a sensation as if a nail were being forced into the parietal bone.* Amelioration in lying down, on the painful side, and by warmth. Aggravation by cold wind, coffee, tobacco, alcohol, efforts in going to stool, in turning the head suddenly, in bending over, in moving the eyes, by noise and by light. Sometimes ameliorated by eating, but aggravation soon after. Sometimes the pain comes gradually and disappears suddenly. There is a termination always by an abundant passage of urine.

Eyes.—Asthenopia with spasms of the eyelids and neuralgic pains around the eyes. Zigzag lines and muscae before the eyes.

Extremities.—Spasms in the limbs. Pain in the tendon of Achilles, and in calf of the leg. Pains at the level of the soles of the feet.

Digestive Apparatus.—Hysterical globus as if a foreign body, a ball, was coming up from the stomach to the throat and would cause a strangulation. Slight amelioration by deglutition. An aggravation if the sick one is "chagrined." Weakness, a goneness and exhaustion at the pit of the stomach with a tendency to sighing and to make long inspirations, sometimes a sensation of emptiness as if the stomach was suspended, being relaxed. Excessive flatulence. Hiccough. Cramps. Sour eructations, and vomiting; sometimes vomiting everything taken. Regimen impossible to determine; the patient will digest well turnip, cabbage, radishes and onions and not able to stand milk and light foods which are immediately rejected. *Paradoxical dyspepsia.* Amelioration by cold foods in the stomach and by warm external applications. *Constipation* of paralytic origin

with excessive urgency for stool which seems more marked in the upper part of the abdomen, with great pain. An aggravation when the stool is soft. Painful constriction of the anus after the stool. Rectal prolapsus subsequent even to moderate effort and an aggravation when the stool is evacuated. Sharp, lively pains mounting up in the rectum, especially some hours after stool. Hemorrhoids with stinging pains during cough and while walking, with an amelioration on sitting down. Hemorrhage and pain worse when the stool is soft. Diarrhœa from fright.

Respiratory Apparatus.—*It unable to tolerate the odor of tobacco.* A dry and spasmodic cough, successive in character, through an irritation of the throat. The more he coughs the more he has an inclination to cough. A great deal of sighing. Pains in the groin in coughing. At times a condition of exhaustion and sweating. *Reflex coughs.* Stridulous laryngitis. Spasmodic coughs, brusque, coming on either without any provocation or through the agency of fear.

Circulatory Apparatus.—Palpitation occasioned by fright or by disappointment.

Urinary Apparatus.—Urine abundant, watery, aqueous, and subsequent to headache.

Genital Apparatus.—(Men. Itchings.) Great desire with want of power. (Women). Periods are premature and abundant, bloody discharge is black, with clots, and of a foul odor. Before the Cycle: Heat and heaviness in the head. A feeling of emptiness at the pit of the stomach. During the cycle: great lassitude, an excess of exhaustion, great excitation, exaltation, fantasies, pseudo-delirium, sorrowfulness, or tears and laughter. Violent pressure in the supra-pubic region. Darting pains in the uterus which starts up on touching. Uterine cramps ameliorated on pressure, and by the horizontal position. Voluptuous excitation. Lasciviousness. Leucorrhœa. Excoriation around the vagina.

Skin.—Itchings. Skin is very sensible to air currents.

Fever.—Intermittent. Chill: with thirst, ameliorated by external warmth. Face red during the chill. Heat: ameliorated by covering up.

Comparisons: Cimicifuga, kali, phosphoricum, sepia, and zincum.

Complementaries: Natrum muriaticum.

Incompatible: Coffea, tabacum.

UVA URSI.—Feels weak, nauseated, sore all over as if bruised; pain in chest, cold in head, throat tickles, feels like coughing continuously; nasal mucous membrane appears raw; symptoms of a severe cold; excess of mucous in throat; no appetite; cutting sensation in urethra on urination; often cured hoarseness.

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BUREAU OF SANITARY SCIENCE

ANNA C. CLARK, M. D., *Chairman*

THE HYGIENE OF THE SKIN.

BY

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THIS subject definitely defined, includes all that pertains to the life, health, and preservation of the skin. A very reasonable perspective is therefore masked, behind an apparently innocent title.

Objectively, the primary, and probably the most comprehensive view of the skin is that of protection. Like many other things this is a wonderfully kind provision of Nature's Architect and one to which we have grown so accustomed, that we do not value its beneficence, and until something occurs whereby the importance of it is "bumped" or "jolted" into our consciousness we fail to appreciate it.

Our purpose is, to go over this field, collating certain data, both new and old, and try to present them in a way agreeable, and to a certain extent at least, edifying.

Sabouraud, the noted French dermatologist, has called the skin "Our Epidermic Armor." A very appropriate and highly suggestive term—but the safety and the welfare of the individual behind or on the inside, depends wholly upon the integrity of the outermost or horny layer of the epidermis, the stratum corneum. As long as these scales remain intact, the hosts of bacteria, spirochetæ, etc., cannot prevail. This is the layer we both see and feel; it varies in thickness in different parts of the body, from 5 to 6 m.m. on the soles of the feet, about 4 m.m. in the palms of the hands, to .02 m.m. on the flexor surfaces of the extremities.

When we consider the attenuation of the horny layer, the burden of its responsibility becomes all the more impressive. Formerly it was taught that this layer was merely a lot of dry and dead scales; this is very much in error. The process of cornification is a thoroughly live one, and is the result of a series of chemical and transitional changes, beginning in the cells of the lowest layer of the rete malpighii from which all others are derived. At this stage the cells are protoplasmic. As development proceeds, the cells become granular, due to the eleiden granules, which some regard as an intermediate product. Later the cells become dry and scaly due to the addition of keratin. It is this substance that enables the horny layer to resist to a certain extent caustic alkalies. The further addition of sulphur and large amount of silicic acid and some other salts, give the increased rigidity to this layer; this applies also to the hair and nails. While this layer is always spoken of as dry, there is some moisture which is in the form of an oily or waxy substance, which also aids in its resistive powers.

Pigmentation is another aid in the process of protection. The color of the skin varies greatly in different races, due to the deposit of coloring material found chiefly in the lower strata of the malpighian layer. In the negro, however, there are additional pigment cells in the cutis vera. In Albinos there is an absence of pigment in the skin and its appendages, therefore exposure to the sun does not cause sunburn. The pigment is known as melanin, and it is this element that is absent from the skin of an Albino, although in his blood is found hemoglobin. One of the later views regarding the origin of melanin, is that it is formed from decomposition products of protein and is found chiefly in the small intestine, during pancreatic digestion.

This opens up the question of diet on pigmentation. Physiologically pigmentation protects against the injurious action of certain rays of the sun. The negro can stand intense sunlight that is intolerable to the white man, who is unprotected by special clothing. This protection does not apply to other forms of heat; e. g., as stokers on board ship, or workers in furnaces. The negro is regarded even inferior to the white man, in resisting the effects of heat and moisture. In other words the pigment appears to protect from the ultra-violet rays.

As a rule intensity of sunlight and pigmentation go together in different parts of the world. It is said that in India there are Hebrews fully as dark as the natives, which brings up the question whether the acquired characteristic has been transmitted, or the whiter descendants have been eliminated from the original stock. Some think that because the skin of a negro baby at birth is lighter in color than that of its parents, it suggests that the ancestors of the Negro race were not as dark as their descendants.

To illustrate somewhat the complexity of the problem of pigmentation, we would call to mind that among the lower animals, and birds, the usual difference in the color of the two sexes, can be completely changed by the removal of the genital glands, either by operation or disease.

Sweat Glands. These glands furnish another very interesting and important link in the chain of evidence of the skin's protective function. First of all is their discharged contents a secretion or an excretion? One definition is that a secretion is a product which is for the use of the body; conversely, an excretion is a waste product; but at such times a discharge may be of indirect use; therefore hard and fast lines cannot be drawn, and probably the fact is that the outflow of these tiny glands is a mixture both secretory as well as excretory.

The sweat glands are developed by a down growth from the epiblastic layer and it is said may be found in the fifth month of foetal life; the secretory surface is augmented by a coiling of the terminal portion of the tubule; these coils are surrounded by a mesh work of capillary blood vessels from a special branch of the cutaneous artery, not connected with the general capillaries of the skin. The glands are also under the control of secretory nerves which can regulate the discharge of sweat apart from the blood supply. When we think of the mixture of various substances from the skin, degenerative and otherwise, also

those from the sebaceous glands, we begin to realize the difficulty in studying this function.

We often hear the terms of *perspiration* and *sweating* used interchangeably; they are, however, not synonymous. Perspiration is a transudation of water through the skin, which can occur even when the sweat glands are not active—as in heat stroke. Perspiration also is chiefly influenced by the vascularity and temperature of the skin. Sweating is an active outpouring of liquid from the sweat glands.

One method for the investigation of this subject, has been to place a patient in a respiratory chamber, so that he breathes by means of tubes communicating with the external air; the chamber can be ventilated or warmed to different degrees; the subject, either naked or clothed, at rest or at work; the amount of water and sweat of course varies with all these factors, and the amount of water and carbon dioxide may be estimated. The amount of moisture from the skin of a man at rest and not exposed to a high temperature is proportional to a certain point of temperature; when, however, it passes this, a new process appears; beads of sweat form and a greater increase in the discharge of carbon dioxide follows. This point is said to be 33 C. to 36 C. (91½-97F.).

Wolpert experimented by covering the skin with lanoline, resulting in a decrease of moisture, but when the critical point of temperature was passed the amount of moisture was greater than from the normal skin. This indicated that the fat lessened the moisture from the epithelium, but did not stop up the orifices of the sweat glands. Secretion of sweat can be caused by the emotions, such as fear and pain, here sweating is not always accompanied by dilation of the cutaneous vessels, as shown by the pallor. In some cases of hemiplegia sweating occurs early with increased vascularity. If the paralysis exists a long time, contraction of the vessels occurs, with lessening of sweat—perhaps complete anidrosis. In traumatic section of the cord, only parts not paralyzed sweat, which can be proved by a dose of pilocarpine. An increase of carbon dioxide in the blood, or a decrease of oxygen will produce sweating, thus probably explaining the cause of the so-called death sweat.

In pneumonia, before the crisis, the skin will be red and hot, but no sweating; in rheumatic fever sweating is profuse. Probably the most important function of the sweat is regulation of the body temperature. When the body temperature rises, due

to exercise, or exposure to hot atmosphere, the loss of heat is increased by the cooling effect of evaporation of the sweat. This it is that enables one to remain exposed to a dry heat many degrees above the temperature of the body. Benjamin Franklin in 1750, during certain electrical experiments, observed that his body temperature was normal, while the external temperature was over 100 in the shade. In confirmation of this point, certain interesting experiments have been made. A man was placed for fifteen minutes in a dry room heated to 126 C. (226+ F.); the body temperature remained normal although a beefsteak was cooked by the heat of the air. Also two jars of water were placed in the room; a layer of oil was placed on the surface of one, with the result that the water boiled quickly; the water in the other jar rose to a temperature of 60 C. (172 F.), but owing to free evaporation did not boil. In such high temperatures the loss of heat by radiation and condensation, has ceased, and the temperature of a man would rise, if the evaporation of the sweat did not cool the surface of the body. On the contrary, if the air is moist as well as hot, evaporation of the sweat cannot proceed rapidly enough to prevent the temperature of the body rising. There have been rare cases reported of absence of the sweat glands; here exposure to the summer sun or muscular exercise will cause a rise of temperature in a short time. Sweat also helps to maintain suppleness of the skin, as well as to preserve the acuteness of tactile sensibility—a dry skin lacks in sensitiveness. Removal of waste products is procured by the discharge of sweat.

There is said to be considerable lactic acid in sweat, and certain laborers who bathe only their extremities are kept clean as well as healthy by their profuse sweating. Indeed some writers are asking whether there is not danger from too much washing, and claiming it would be desirable to have less hot water and soap; and more muscular exercise with more sweating. From the evidence thus far produced, and if we were obliged to live with the individuals, personally, we should vote decidedly in favor of the soap and hot water.

The Sebaceous Glands. These furnish us with another phase of the skin's ability to resist bacterial onslaughts. The glands are developed by a down-growth from the layer germinativum, and are associated with the hair follicles; they are found everywhere except palms of the hands, soles of the feet,

and dorsum of third phalanges. In other words, where the sweat glands are the most numerous, these are absent.

The examination of sebum is usually made from the vernix caseosa of the newborn; when fresh, it is a semiliquid, oily, material. Under the microscope it is found to be desquamated epithelium, in various stages of decomposition, fatty acid needles, also cholesterin. The compound cholesterins being by far, the more important element. These are very resistive to the action of putrefactive organisms, and it is probable they are the source of the skin's help, in this direction.

The functioning of these glands, is said to be very similar to that of the mammary glands. There is no known nerve supply to the glands; the stimulation appears to be indirectly due to the vascular changes. The time of their greatest activity is from puberty to the end of the prime of life; clinically it is well established, that there is a reflex relationship between these glands and the genitalia—witness the stimulation during the menstrual period. Again, cases of acne vulgaris in both sexes are frequently cured by marriage.

A further action of this sebaceous material is to maintain the skin's equilibrium between dryness and moisture—excess in either direction would be harmful.

Because of these glands, originated the phrase "Shedding water like a duck's back." Perhaps it is not so well remembered, that water will run off the skin of a healthy man also. On the contrary, by the prolonged action of water and especially if too strong soap be used, the fatty material may be removed. For this reason it is said that long distance swimmers increase the protection by rubbing tallow or some fatty substance on their bodies.

Heretofore, we have been dealing with the skin as directly protective, and by changing our viewpoint, we come to see it as reflexly, or indirectly protective.

The skin of the present human, differs from that of his predecessors, or confreres, in that it is characterized by nakedness. In one respect this is probably an advantage, as it enables him by means of artificial shelter and clothing, to endure a greater range of temperature and climate, than any other animal.

Sensory Organ. The skin is the most extensive sensory area of the body; it is constantly in action as receiver or transmitter of impressions, influencing the general nervous system,

glandular, and vascular organs. Some one has called the skin the tell-tale organ.

Formerly we had only the five classical divisions of sensation, known as sight, hearing, smell, taste and touch; now it is taught that the skin can definitely differentiate at least four sensations, viz.: touch, pain, heat and cold.

It is taught according to the so-called law of the specific energy of nerves, the stimulation of a sensory nerve always evokes its peculiar sensation, whatever may be the stimulus; thus the retina causes the sensation of sight, whether the stimulus be electrical, mechanical, or light itself. Nearly all of us have "seen stars" from a blow on the eyeball. A passage of an electrical current from the forehead to the nape of the neck will cause the sensation of a flood of light. It is estimated that throughout the skin's surface there are from two to four millions of so-called sensory spots, differentiating the various sensations. Certain of them give the sensation of touch, others of cold, others of warmth and others of pain.

It should be borne in mind that regardless of the stimulus, the various spots reflect their own sensation, thus warmth on cold spots causes coldness, and painful spots reflect pain whatever be the irritant. Some claim, therefore, that pain is not necessarily pathological, but a specific sensation for the protection and well being of the organism. Touch is a sensation produced by any mechanical irritation; it is the recognition of a deformation of the skin or its hairs. It is possible to have no external stimulant, the change being in the skin itself. Delicacy of the sense of touch is decreased if the skin has become thickened from manual labor; or frequency of repetition will diminish the response, this may go on to complete anæsthesia, e. g., a rough or woolen garment will at first cause pronounced irritation, but soon the wearer ceases to be conscious of the annoyance; and the picture of "Grandpa" with his spectacles on his forehead searching for them, is familiar to everyone. There is thought to be about half a million of these tactile spots in the skin; all, however, do not reflect the same sense of touch—i. e., there may be tickling, itching, or pricking. The *Cold Spots* are believed to be much more numerous than the warm, being in approximate ratio of about ten to one.

During the greater part of life we are not conscious of the temperature of the skin, and within certain limits, when the changes occur slowly, we readily become adapted to them.

This condition of so-called comfortable equilibrium, is known as physiological zero. The greatest effect is noticed when passing from warmth to cold, but after a time adaptation occurs, and takes place even when the different parts are at different temperatures.

Reaction to cold is more rapid than to warmth; it can be illustrated by rubbing menthol upon the forehead, which acts not only by evaporation, but by excitation of the end organs for the sensation of cold.

Lastly, we would call to your attention, one more function of the skin—that of reflecting the body temperature. There has been considerable discussion as to the uniformity of the body temperature. Upon the trunk under cover of the clothing, it is more constant than upon the uncovered extremities, but for all, there is a wider range of temperature than we are apt to think. We can easily demonstrate it by passing the hand in succession over the face, chest, abdomen and feet. When one is thoroughly comfortable, he does not appreciate the variations. Some even claim that the absence of uniformity is an evidence of health and well being; pointing out that there is little or no physiological uniformity in living things and it is only as uniformity of body temperature develops that discomfort and inefficiency arise. Furthermore, that changes in temperatures increase the stimulation of the nervous system, thereby insuring a more steady growth of the body and mind. This being true argues our variable climate a blessing in disguise.

External conditions of heat, moisture, and wind, have an effect upon the skin; probably the effect of moisture is the most subtle, therefore the reading of the dry thermometer is not nearly so important as that of the wet bulb thermometer. Haldane's experiments have proved this, and show that the point of accommodation and safety is passed with a moist temperature of 90 F., even if the man is not exercising, and if muscular work is engaged in, it is about ten degrees lower. We can all testify to the difference in comfort when the external temperature is dry, especially if accompanied by wind;—conversely, the action of cold is intensified by wind. Arctic explorers tell us of the difference in suffering from cold on a calm day—and the cold to which wind is added.

We realize that every one must be weary, although much has been left unsaid in the essay. Our defence for attempting

it is, that the subject was suggested by a friend—perhaps on the principle, “Oh that mine enemy would write a book.”

In conclusion, we wish to make our acknowledgments to the following authorities, whose works were consulted and from which extracts made: Schamberg, Stelwagon, Crocker, Sequira, Hyde, etc., diseases of the skin. McLeod, pathology of the skin. Pembray, functions of the skin. Simons, Physiological Chemistry.

THE WORK OF THE UNITED STATES PUBLIC HEALTH SERVICE IN THE DOMAIN OF SANITARY SCIENCE.

BY

WM. G. STIMPSON, SURGEON, UNITED STATES PUBLIC HEALTH
SERVICE.

THE right to study the diseases of man and conditions influencing the propagation and spread thereof, including sanitation and sewage and the pollution of the streams and lakes of the United States was granted by Congress to the United States Public Health Service by the Act of August 14, 1912. The importance of sanitary science was thus recognized by Congress and this Service through the powers conferred upon it by this Act, became, in fact as well as in name, the Health Service of the Government. For the past twenty years it has been doing work of this character under the Act of February 14, 1893, which directed it to co-operate with and aid State and Municipal Health Authorities in their measures for the prevention of the spread of contagious and infectious diseases; and even under this limited authority much has been accomplished and many sanitary problems have been solved. One of its most notable achievements was the suppression of plague in San Francisco in 1908. Here all work was concentrated upon the destruction of rats, the host of the flea, whose bite transmits the disease to man. Many rats were caught in traps or killed by poison, but a marked reduction in their numbers was not made until the citizens had been thoroughly aroused and understood the necessity of keeping all food and garbage in rat proof containers and until the nesting and hiding places of rats had been destroyed. This latter object was attained by tearing up wooden side walks, placing houses upon concrete

foundations, or raising them upon piles, screening cellar windows, chicken yards, and other places where rats are liable to enter; in other words, building out these rodents from houses and yards so that they could get no shelter from their enemies. This campaign was eminently successful, and no plague-infected rat has been found in San Francisco since October 23, 1908, although thousands have been examined and the work is still going on.

The discovery was made that squirrels in the counties surrounding San Francisco Bay were suffering from plague, probably having acquired the disease from rats, and there was danger that these squirrels would transmit the disease back again to the rats and thus the city become reinfected so a squirrel free zone was established around the bay by destroying these animals with poisoned grain, or by bisulphite of carbon injected into their burrows. Squirrels are more resistant to plague than rats and it is believed many of them recover from the disease or suffer from it in the chronic form, the older ones giving it to the young and thus continuing it from year to year. War has also been waged against squirrels in all other places where plague infected ones were found, but squirrels are so numerous, it is difficult to kill them all and thus eradicate the disease entirely. The Service has, however, succeeded in stamping out the foci of plague among them in many localities and there is a probability that in a few years there will be no more plague in the State of California. During the first part of the year 1912, 63,000 squirrels were examined in California and 613 of these had plague. The work is now mostly confined to a few counties. In Contra Costa County 21 squirrels out of 326 caught during the week ending July 26, 1913, were infected with plague.

This Service succeeded in checking yellow fever in New Orleans and other States in the South in the year 1905. This disease had gained headway before its presence was known, there being as many as 200 cases in New Orleans alone before suppressive measures were instituted. The work was based upon the destruction and prevention of the propagation of mosquitoes. The *stegomyia callopus* is a house mosquito and for that reason is much easier to get rid of than the malaria or swamp mosquito. It hides in houses during the day where it is readily destroyed by fumigation. The breeding of mosquitoes was prevented by the screening of cisterns and water bar-

rels, clearing away old cans, bottles and other rubbish which might contain standing water and oiling of all other places which could not be otherwise treated. All patients suffering from fever of any kind were required to use mosquito nets. A Train Inspection Service was established which allowed persons to leave the stricken cities and go to non-infectable places, or to return South, if well, after having been away from the fever district for six days. Freight cars were fumigated and then permitted to go to their destination. This Train Inspection Service was of great use since no district which was not previously infected became so after it was established, and at the same time there was little interference with freight and passenger traffic. Detention camps were established where people could go and remain six days, when if they were free from fever they were allowed to depart to wherever they wished to travel. There was a marked diminution of yellow fever cases a few weeks after the Service took charge, and the disease had almost entirely disappeared before the advent of frost.

The Service has made a special study of typhoid fever and has issued a bulletin on its causation and prevention which has been widely distributed over the country. Officers are frequently sent upon the request of local authorities to investigate epidemics of this disease and to make recommendations for the improvement of sanitary conditions. Among the places visited recently are Lincoln, Neb., where the chief source of the infection immediately responsible for the outbreak was the public water supply; Texarkana, Ark.-Tex., where 73 per cent. of the cases could be attributed to the use of milk from one dairy; at Selma, Ala., where the death rate was high, the chief cause was soil pollution and insufficient care in handling the sick; this was the main cause also at Yakima, Wash., and the correction of these unsanitary conditions has resulted in the reduction of 90 per cent. in the prevalence of typhoid fever in 1911 as compared with previous years.

A sanitary survey of the great lakes has been made in connection with the study of typhoid fever and the results have been published in two volumes. This sanitary survey has been carefully done, the condition of every town and hamlet on these waters having been gone into. This report shows that there is not only an undue prevalence of typhoid fever in many of these communities but the fact is brought out that this prevalence is due in greatest measure to drinking sewage polluted

water from interstate and international waterways. There is a deplorable condition in many places. Frequently unfiltered water from a contaminated course is employed. In some cities when the water is taken far out into the lake from an alleged safe point, no daily bacterial count is made, or if it is made, no record of the number of *B. Coli* is kept which alone shows the presence of intestinal discharges. Some filter plants are badly constructed and others carelessly operated and some are struggling with a raw water so badly polluted that the filters are overtaxed and the filtered water cannot be regarded as safe. The remedies for these conditions vary with each city and depend upon the amount of purification necessary, the character of the raw water and the financial condition of the community; but a safe water supply should be provided in every instance. In order to determine this, bacterial counts and quantitative estimation of *B. Coli* should be made daily; and if such tests were made, few if any of the cities which depend on the great lakes would be found to have a safe supply of water 365 days in the year. To carry out these tests properly two standards are necessary, one for raw water, and one for filtered or treated water. It is difficult to get a satisfactory result if the raw water contains over 100,000 bacteria to the c.c. therefore if possible a purer raw water than this should be obtained. After water is filtered it should not contain more than 100 bacteria to the c.c. and not more than one colon bacillus in 10 c.c. Towns should not be allowed to discharge their untreated sewage into streams if the bacterial count is thereby made so high as to make it impossible for places lower down the stream to obtain raw water sufficiently free from bacteria to prevent it being rendered safe by filtration. Such towns should be made to treat their sewage until its discharge into the stream will not unduly pollute it.

A sanitary survey of the Missouri River has also been completed with the help and co-operation of the States and Municipalities upon its border; and in connection with the carrying out of the provisions of the Act of August 14, 1912, to ascertain the extent and significance of the pollution of interstate streams, detailed and extensive work has been started at various points along the Ohio and Potomac Rivers. This work should show considerable light upon the general question of stream pollution. Daily bacteriological and chemical examinations of samples of water taken at various points along these rivers will be made over a prolonged period of time. There

will be a main headquarters and laboratory for the Ohio branch of the work and one for the Potomac with numerous substations. A number of commissioned officers, sanitary engineers and technical assistants have been assigned to this duty.

The Service maintains a large laboratory at Washington for the study of diseases and the training of officers in research work. This laboratory has issued 89 bulletins and the character of the work done is shown by the titles of a few of these bulletins; namely:

No. 21.—The immunity unit for standardizing diphtheria antitoxin.

No. 29.—A study of the cause of sudden death following the injection of horse serum.

No. 38.—The influence of antitoxin upon post-diphtheritic paralysis.

No. 56.—Milk and its relation to the public health.

No. 57.—The presence of tubercle bacilli in the circulating blood in clinical and experimental tuberculosis.

No. 64.—Studies upon anaphylaxis with special reference to the antibodies concerned.

No. 82.—The determination of the phenol coefficient of commercial disinfectants.

One of the diseases that has been recently studied here is measles which has been shown to be reproduced in monkeys by inoculation of blood drawn during the early eruptive stage. It has also been proved that the nasal and buccal secretions of cases of measles are infective during the early part of the disease, but that these secretions are not infective 48 hours after the eruption has appeared. The scales of measles do not carry the virus. Tabardillo or Mexican typhus has been transmitted to monkeys and the body louse was found to be the chief agent for the distribution of this disease among human beings. Brill's disease, a mild form of typhus prevalent in New York and probably in other large cities on the Atlantic Coast, and Tabardillo are identical, for an attack of the former will render a monkey immune from a subsequent infection with the latter. Investigations of Rocky Mountain spotted fever have been in progress for several years and are still going on. The chief problem has been tick extermination, (the tick being the carrier of the disease) by dipping of domestic stock and killing of small wild animals. The dipping fluid must be used early in the season before the female tick has reached its full stage

of development. Ticks will not attach themselves to animals for at least a month or probably two after the dipping. Experiments on the small wild animals of the regions show that they are susceptible to spotted fever, but as the pathological lesions are not marked, diagnosis can only be made by blood inoculation from the suspected animal into a highly susceptible animal, such as the guinea pig.

The Marine Hospital at Savannah, Ga., is the chief base for the study of pellagra and here experiments have been in progress with some new drugs and a leucocytic extract prepared from rabbits. Monkeys have been inoculated with material from pellagrins and feeding experiments carried on with chickens. The Service has issued a precis on pellagra which summarizes the knowledge regarding it acquired in recent years. The study of this mysterious disease has assumed great importance in view of the fact that it has been reported from 40 States, and a conservative estimate places the number of cases that have occurred since 1907 at 30,000, with an average case mortality of 38 per cent. The Service has made a special study of hookworm disease and has co-operated with the State Health Authorities and the Rockefeller Sanitary Commission in the movement for its eradication. Medicine has been dispensed to nearly a quarter million persons. The Marine Hospital at Wilmington has been set aside for the special study of parasitic diseases, where problems connected with these diseases are taken up. Soil pollution is the main factor in their distribution. A sanitary survey of nine States has been conducted, and of over 43,000 rural homes inspected, 21,000 had no privy at all. A special privy has been designed by three officers of this service which can be built cheaply, is screened from flies, and if directions are followed contact of the excreta with the soil is avoided until all pathogenic germs and intestinal parasites are destroyed. The people are waking up to the fact that the disposal of human excreta is a serious matter and that pollution of the soil with this material even in country districts is dangerous. The unsanitary outhouses in our villages and towns are a menace to the health of the inhabitants and should not be tolerated. Flies breed therein and carry disease germs direct to kitchens and dining rooms. It would be better if physicians instead of going through the front door to cure disease would go to the back door before sickness begins and prevent such sickness by insisting upon the correction of unsanitary conditions.

The Service has also devoted much time to the study of poliomyelitis and has issued a report upon the subject. It has been determined that this is a communicable disease and that stable flies are in some instances the means of its transmission. Of 134 cases recently notified in Texarkana and vicinity 93 were in the country districts. A set of rules has been prepared to prevent the spread of the disease from one child to another.

During the past year all the Indians in the United States have been examined by officers of this Service to ascertain how many were affected with trachoma. 46.1 per cent. were found to have it. An investigation was also made last summer at the request of the State Health Authorities of the prevalence of trachoma in the mountains of Kentucky. 3,974 persons were examined of whom 500 were sufferers from it ($12\frac{1}{2}$ per cent.) Trachoma had evidently been among these people for a long time, as cases were seen which had existed 40 or 50 years. An officer has been sent to Kentucky this summer to carry out systematic measures to eradicate this disease. In this connection I wish to call attention to the operation of gratage for the cure of this affection. In this operation the eyeball is protected by a hard rubber spatula and the granulations on the everted lid are first incised with a double bladed knife and then scrubbed with a tooth brush soaked in a 1-2000 bichloride solution followed by rubbing with dry gauze until all granulations are removed. This operation appears cruel and brutal, but is not so; the eyelids in a few days return to their normal condition. A cure is effected in two weeks which under other methods takes many months or years.

The Service maintains a sanitarium at Fort Stanton, N. M., for the treatment of sailors suffering from tuberculosis. It also has a leprosy investigation station at Honolulu, H. I., where experiments for several years passed have been carried on in the effort to learn how this disease is transmitted and to find a cure. The officers in charge of this work have succeeded in growing the bacillus leprae upon artificial media, and vaccine therapy and serum therapy have been tried but it is too early as yet to know what the result will be. There are 146 cases of leprosy in the United States under the control of State and local authorities, 2,754 in the Philippines, 696 in the Hawaiian Islands, and 28 in Porto Rico. There is some evidence to show that leprosy is a house disease as other cases have developed year after year after the first leper was taken from a house.

The Service has established several laboratories in the South where studies of malarial fever are in progress. An effort is being made to ascertain how prevalent the disease is and to show persons dwelling in malarial districts how to combat the disease, by taking quinine at regular intervals; and by preventing the growth of mosquitoes. Great assistance in the prevention of this disease can be given by physicians, where malaria abounds, if they will have the blood of all their patients examined at regular intervals. Treatment could then be continued until all forms of the plasmodium have disappeared from the blood and in the meantime patients could be cautioned to sleep under screens so that mosquitoes would not become infected by biting them and thus transfer the plasmodium to others.

Two thousand eight hundred and forty-seven treatments for rabies have been sent to State Boards of Health and others, and 429 persons have received treatment at the laboratory. One hundred and eleven persons were reported as having died from this disease in 1908, 98 in 1911. This disease was apparently not present in the Pacific Coast States before 1908.

The Service sends out every week sanitary reports which contain information of the current prevalence of disease; the occurrence of epidemics and related subjects. Here will be found reports from United States Consuls giving the number of cases and deaths from cholera, yellow fever, plague and smallpox in every portion of the earth. Short articles describing new discoveries in sanitary science, or abstracts of papers read before societies on public health are often incorporated in these reports so that health officers and others to whom they are sent may have the latest knowledge on the subject.

The Service maintains 23 Marine Hospitals and 125 Relief Stations where merchant sailors can apply for treatment; it has charge of all the maritime quarantine stations of this country except those of the ports of Boston, New York, Philadelphia and Baltimore. The quarantines of our insular possessions are under the control of the Service and the Quarantine Officer of Manila is also the Health Officer of the Philippines. Its officers are to be found in most of the large cities of the world from which there is danger of importation of disease. Among these cities may be mentioned Hongkong, Amoy, Shanghai, Yokohama, Rio de Janeiro, Guayaquil, Havana and Naples. These officers are detailed in these countries to give timely no-

tice of the presence of cholera, plague, or yellow fever and to take such precautions as will prevent their being carried to this country. Inspection of immigrants at the port of arrival by officers of this Service is required by law and all those having dangerous, contagious or loathsome diseases or who are idiots or insane are not permitted to land. 1,052,649 immigrants came to this country during the year 1911, of whom 22,349 were sent back.

The interstate quarantine regulations are enforced by this Service and orders have been issued abolishing the common drinking cup and roller towels on trains and at all depots of railroads engaged in interstate traffic.

The above remarks give an idea of what is being done by this Service in the domain of Sanitary Science. Its power of doing good is only limited by the number of officers and the amount of money appropriated for its use. When the corps of officers has been sufficiently increased and plenty of money is available this country will have a Public Health Service equal to that of any in the world.

THE THEORY OF WATER PURIFICATION AND SEWAGE DISPOSAL.

BY

FRANKLIN F. MASSEY, M. D., WALTERS PARK.

PHYSICIANS are very prone to discuss topics of very deep nature and to carry on the discussion from time to time upon the disputed points in the abstract, but very frequently doctors even of good repute and successful in their peculiar or particular line of work do not know the whys and wherefores of some of the most important civic sanitary movements of the day. It is with the idea of giving some little explanation of the "Theory of Water Purification and Sewage Disposal" that this paper is prepared, in the hope of refreshing the memory of those who have known but who have forgotten, enlightening a little bit those who have not made the matter a subject of study, and making a general review for us all. There is nothing particularly new or startling in the article, but the desire is to benefit all who will follow the thoughts of the writer.

With the growth of rural communities, the expansion of

cities and other progress in towns and villages, the matter of not only the water supply, but also of the disposal of the refuse has become a most important one. Thus the farmer can no longer dispose of refuse either from animals or man as he did formerly without the great possibility of exposing his neighbor to disease; no longer can the small town or the factory or other industrial plant drain its water at will into a stream without materially altering the quality of the supply of some other community further down in the course of the stream, for the very reason that the entire country has grown to such an extent that we are all neighbors, and also there have been so many demands upon the water supply of wells and small streams that they are insufficient to meet the requirements for an abundant and pure supply. It is just as important to get rid of effete material as it is to obtain fresh water, for if the effete material were to remain, disease would be almost sure to breed, so at the present day it is wise to work from both ends—supply and disposal.

After the above statements it is needless to remark that the water for consumption should be guarded with great consistency, for even rain water may become contaminated in one community and be the source of infection in another as is shown by occasional showers of fish, precipitation of red snow and reddish rain (which was at one time thought to be blood but which has been definitely proven to be the result of a certain micro-organism that produces a reddish color to the water before it is drawn up by the action of the sun). Besides these things that may be seen in water there are others that may be recognized by the aid of the nostrils—as for example some of the sulphur waters that are due to the liberation of sulphur in the course of metabolism of certain germs.

Because of these and other reasons we should be very careful as to what we allow to flow into our streams and any other accumulation of water.

These micro-organisms may be either of plant or animal nature and are all classed as germs. Bacteria are germs and are numerously distributed, the bacilli forming a great proportion of them, the word bacillus coming from a root meaning "rod shaped" they being of that general shape. The word "microbe" comes from two Greek words "MIKROS," meaning small, and "BIOS," meaning life—small life. Hence these terms are quite freely interchangeable.

In their process of anabolism, bacteria obtain their carbon from the carbon dioxide mixed in the air or water and their other food products from inorganic substances in aqueous solution. Some of these bacteria can only live in the presence of atmospheric oxygen, and Pasteur has termed them aerobic, and those deriving their oxygen from the organisms in which they live or decomposing material and not being able to live in the presence of atmospheric oxygen are termed as anaerobic. The action of bacteria on sewage is so well put in an article appearing in the "Reference Handbook of Medical Sciences" that it will be here quoted:

"The bacteria in the sewage in the presence of oxygen, first attack the carbonaceous matters, carbonic acid being formed, nitrogen and hydrogen are set free and unite to form ammonia, this in turn uniting with the carbonic acid, forming ammonium carbonate, which goes into solution. The next step is the oxidation of the nitrogen of the free ammonia, first to nitrous acid and then to nitric acid by the nitrifying bacteria working in the presence of oxygen. The nitric acid then unites with a base, such as sodium or potassium, present in the sewage or in the filter, and sodium or potassium nitrates are formed. These are, in the small amount present innocuous mineral salts, and appear in solution in the effluent. In this work of the bacteria much of the organic matter is also changed to gaseous forms and many gases are set free. If filtration through properly prepared filter beds is carried on slowly enough, all the organic matter in the sewage applied to these beds can be changed either to gaseous forms, such as carbonic acid, ammonia, free nitrogen and hydrogen, which escape into the air, or to mineralized bodies, which appear in solution in the effluents of the filter."

It may be stated as we go along that the useful bacteria that act upon sewage are not found much below the surface of the ground, hence the best forms of earth to use for filtration purposes would be those permitting of the greatest exposure to the air, in other words, porous earths or stones. Germs may be killed as well by chemicals as by the action of other germs as has just been described, but there is a possibility that the chemical that will kill the harmful ones will also kill the useful ones and also make the water after being so treated of such a poisonous character that it would not be fit for use by man or animal

and even fish would be unable to live in it. Here is a plea for the permitting of the bacteria to get in their good work.

There are various methods that have been from time to time used to dispose of sewerage, namely:

1. Disposal by dilution—this has been done where there is a city or town near to a large stream or the ocean and the refuse is allowed to flow into it and is carried away.
2. Sewage farming or irrigation which is not nearly so popular as it promised to be at one time.
3. Filtration through intermittent sand filters.
4. Chemical precipitation followed by filtration.
5. Mechanical straining followed by filtration.
6. Filtration through gravel or other filters of coarse material with forced aeration.
7. Contact filters.
8. Septic tank treatment followed by filtration.
9. Intermittent continuous filtration.

It is not within the scope of this paper to enter into all the details of the matter under discussion, but just sufficiently for those reading or hearing the paper to get a clear and concise idea of the subject. Therefore, having made these introductory remarks, it may be well to proceed with the rest of the discussion and speak of the practical part of the matter. Right here it may be well to consider various incidentals concerning the sewers or drains for the effete material. Nothing has been found more satisfactory than Portland cement for its durability and imperviousness to the materials passing through it, although brick has been used and may be all right if it will not absorb more than twelve per cent. of water. This ability of the sewer material to absorb is very important indeed, for if there is much absorption the ground surrounding the sewer will become contaminated. All sewers should, of course, be well ventilated, but it is not necessary or advisable to let too much fresh air enter at any one place, for if that is permitted there will be too much of a rush in and there must of necessity be an outlet and there will be a great rush at the outlet and that might be a source of disease or unpleasantness. All that is needed is sufficient air to prevent too great a collection of sewer gas at any one point.

Of course it is absolutely wrong to have sewage thrown right into a stream in an unaltered condition, so therefore it should be treated in some manner. Various methods have been used

in times past to purify sewage and many of them discarded because of their inability to do what was wanted of them or because of the cost. One way that was formerly used was to let the sewerage flow right on to the soil and used as a fertilizer. The watery part of the sewage was in some cases purified to a certain extent, but there was found nevertheless that there was a certain amount of harmful germs resulting. Then later some chemicals were used and that found to be not altogether satisfactory as the powerful chemicals killed the useful germs as well as the others. There has, however, been found one very satisfactory system which is briefly described as follows: The sewage is first drained into a septic tank made preferably of concrete, covered or uncovered, preferably the former. The sewage passes in and out of this slowly enough to permit of sedimentation and the fluid material passing off above leaving the solid material for the bacteria to get in their work. The solid material is removed at stated times a few months or so after first entering and after all organic matter is destroyed. From the septic tank the watery material is let off automatically by means of an inverted syphon which goes about eight feet below the surface or bottom of the tank and throws the fluid into a fountain or series of fountains playing upon stones about the size of a hen's egg, thus allowing of aeration and the action of aerobic bacteria and sunlight. The bed where these stones are slants slightly to the one side so that the fluid will gravitate to one end and is drawn off below by means of tiling which finally empties into a pipe which conveys the fluid to a place where a solution of lime is allowed to mix in small quantities with the fluid and then it is drawn off by gravity and sent to a sand filter bed where it meets the air again and loses its chemical properties and is discharged into the stream and is as pure as any spring water obtainable. This very method has been in successful operation at the State Insane Asylum at South Mountain, near Wernersville, Pa., for some time and has proven to be really a success, and can be held as proof that a combination of several of the methods before mentioned is the best plan to follow.

With these remarks the paper will be closed and with the hopes that those following its thought will have been benefited thereby.

BUREAU OF GYNECOLOGY

G. W. HARTMAN, M. D., *Chairman*

THE CARE OF THE PERINEUM DURING LABOR.

BY

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So many cases of perineal lacerations of various degrees have come to my notice that I have been induced to take up this subject for your consideration. I do not intend to discuss it at any great length, but only to bring out a few points in reference to the prevention of these accidents and leave the rest to you.

An anatomical study of the pelvic floor of the parturient woman, immediately after delivery, always shows more or less injury to all the structures, the connective tissue is lacerated in many places, varicosities of various sizes and degrees, lacerations of the levator ani muscles and a bruised condition of all the tissues, sometimes prolapse of the urethra, vagina, bladder and uterus. The importance of the lacerations depends upon the extent of the injury to the levator ani and sphincter muscles, a severe laceration of this portion of the vaginal outlet may be followed by cervicitis, endometritis, sterility, rectocele, cystocele, uterine displacements in all their various degrees, or if the perineal tear goes through the sphincter ani into the rectum it causes one of the greatest afflictions, "Incontinence of Feces."

Injuries of the pelvic floor can be repaired but they never regain their original strength and integrity, all primiparae suffer lacerations of the fourchet, 10 per cent., according to De-Lee, of multiparae suffer laceration through to the sphincter ani, and only operative cases produce a complete laceration through to the rectum. In my own practice, covering a period of twenty-six years, I have never had a complete laceration of the perineum and I try to reduce all lacerations to a minimum.

Deep tears are positively avoidable in normal cases, but in abnormal cases they will occur even in the best of hands and under the most favorable conditions. The pelvic outlet may be diseased, syphilitic, or varicose, rigidity of the tissues, or a

weak atonic condition of the tissues, which permits them to tear easily, a high narrow pubic arch, which forces the foetal head hard on the perineal floor, necessity for rapid delivery, as in breech presentations, when the loss of the child is imminent, here the danger of laceration is not to be considered, but the after-coming head must be extracted as soon as possible to save the child's life, abnormal presentations present an unavoidable cause of laceration, as in face presentation, a very large child by over dilation of the pelvic outlet. How then can we prevent these lacerations? As soon as the first stage of labor is complete, the os fully dilated and the head of the child engaged in the pelvic strait, I remain with my patient, permitting her to assume any position most comfortable to her, not allowing her to bear down over much during the early part of the second stage. I never hurry this period of labor without sufficient cause, always watching the tone and frequency of the foetal heart, when labor is well advanced I encourage the patient to bear down during the height of the uterine contractions, after labor is well advanced and the presenting part well down in the pelvic strait, I place the patient close to the edge of the bed, patient lying preferably on her left side, with limbs flexed, or in other words, in a modified Sims position, then I have my patient where I can have full command of the pelvic outlet. Two principles are here to be observed for the protection of the perineum: First, slow delivery, and, second, to maintain the head in forced flexion. When the head is well down on the perineal floor and the perineum bulging, I introduce one or two fingers in the vaginal canal, putting the tissues on a stretch, I do not attempt this during pain but in the interval between pains. Do not hurry labor at this stage or apply forceps in order to get away from your case to attend someone else that does not need you.

Give her all the time required to dilate the vaginal outlet, watch the foetal heart and as long as that is good the patient's strength continues and the pains regular and forceful; why hurry?

Watch that head; how it comes down with each pain, slowly but harmlessly dilating the ring at the outlet, when the tissues are sufficiently relaxed and dilated they may be gently pushed back and the head delivered between pains.

I never permit the head to be delivered during a pain if I can possibly prevent it. If the pains are violent and the expul-

sion too rapid the patient should be directed to breathe rapidly and refrain from bearing down while the attending physician should make firm pressure on the presenting part, not permitting more pressure on the tissues at the vaginal outlet than they will bear without injury.

If the tissues show signs of giving way and a tear cannot be prevented episiotomy should be resorted to. This operation, I suspect, is not performed often enough, which, if resorted to would often save the patient much suffering and in some instances the life of the child.

When the presenting part is distending the vaginal outlet to its extreme limit and the tissues are thinned out to a point of rupture, slip one blade of a pair of blunt pointed scissors under the mucus membrane of the vagina during a pain and make a good free incision; do it quickly during a pain and it will hardly be felt by the patient.

I usually employ the lateral or bi-lateral incision, although some use the median incision or the medio lateral. I prefer the lateral incision and I increase the circumference of the vulvar outlet from one to one and a half inches. Where using the lateral incision, if that is not sufficient the opposite side can be incised doubling the increase of the first incision. These wounds are harmless by not destroying the supporting parts of the pelvic floor.

After the tension is removed the parts collapse and almost coapt themselves, but I think it best to close them with sutures.

I usually use three, one on the mucus surface, one on the skin surface and the other at the margin of the muco-cutaneous surface, thus preventing any absorption of septic matter.

By using proper care and remaining with the patient during the latter or expulsive part of the second stage of labor, much can be done to save mothers from a long list of pelvic ailments which remain with them for years and many of them for the rest of their lives compelling them to drag through a life of misery, and unhappiness, cursing the very day of their marriage; holding marriage and motherhood responsible for all the suffering they have endured, while, in fact, it was due to the accidents of an abnormal birth or to a careless attendant.

For practical purposes lacerations of the perineum are divided into three degrees: the first when one half of the perineum is left uninjured; this injury is mostly found in primi-

parae, and are easily closed by a few sutures, many of them healing spontaneously.

When the tear extends further back, even to the sphincter ani, it is termed one of the second degree; this also should be stitched up as soon after delivery as possible, which will control hemorrhage and prevent septic infection.

Lacerations of the third degree is where all the tissues are torn through to the rectum. This tear is usually caused from a very large child, abnormal presentation, or instrumental delivery, and may leave the patient in such an exhausted condition that the parts cannot be satisfactorily repaired immediately after delivery, but an effort should be made to close the wound as soon as possible or within twenty-four hours after delivery. If this cannot be done then the patient should be kept under observation and an operation for the repair of the parts performed by a skilled surgeon eight or nine months after.

I have only touched a few of the scores of points that could be enumerated in the management of the female perineum. The subject is too important and too broad to cover in a short paper. My only object is to impress upon the minds of those who may hear or read this paper the great importance of saving the perineum from avoidable injuries and to properly and speedily repair all those that are unavoidable, so that the mothers who have placed their welfare confidently in your charge may in after years rise up and call you blessed.

PICRIC ACID IN THE TREATMENT OF SKIN LESIONS.—The following is an abstract from a paper on "Picric Acid as an Aid in the Treatment of Various Skin Lesions," by Herbert B. Wilcox, M.D., N. Y. City., published in the *Archives of Pediatrics*, November, 1913.

In testing picric acid against bacillus pyocyaneus and staphylococcus aureus, Ahrenfried demonstrated that one per cent picric acid has fifty times the bactericidal power of a one per cent carbolic acid solution. A year's experience on Dr. L. E. La F  tra's service and the outpatient department of Bellevue Hospital, in the treatment of burns, psoriasis, impetigo, acute and chronic eczema, ringworm, erysipelas, intertrigo and accidental skin excoriations, by picric acid, has shown it to be a very useful drug. Among the striking effects are the prompt relief of itching, stinging and pain—that is the anesthetic effect of the preparation; its antiseptic action in rapidly cleaning up superficial infections; its coagulating, protective action of the skin—in this way obviating maceration of the parts about the lesion and generally increasing the skin's resistance; and its easy application, which may be in aqueous or alcoholic solution, painted on, by wet dressing, or by ointment.

THE PHYSIOLOGICAL TESTING OF HEART TONICS.

BY

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"THE Physiological Testing of the Heart Tonics" which is the subject assigned for my discussion is a very inaccurate title.

A satisfactory definition of a tonic has never been given, much less, a heart tonic. The word physiological is not appropriate because when any active drug is given the normal processes of the body are no longer physiological.

For these reasons, such a subject as "The Pharmacologic Standardization of Drugs Having a Particular Action on the Heart" would be far more fitting.

Since digitalis is the most important member of the group of drugs known as "heart tonics" a discussion of the methods of standardizing this drug will be first considered.

Medicinal Use and Therapeutic Action of Digitalis.

It is well known that digitalis has had a place in domestic and medicinal therapy for centuries, and many of you know that a Birmingham physician by the name of Withering,¹ published in 1785 the first reliable observation of the medicinal properties of this drug. The diuretic properties of digitalis were first observed, but after the middle of the last century its ability to slow the heart so impressed the medical profession that digitalis was, and is even to this day, often used indiscriminately for all conditions where the heart beat is irregular or rapid. It can now be demonstrated that digitalis is only of particular value in a very limited number of diseases of the heart and mainly in auricular fibrillation.

So far as slowing the rate of the heart beats is concerned, it may be laid down as a law, that digitalis is far less effective when the rhythm of the heart is normal than when there is auricular fibrillation.² Most authors state that digitalis causes constriction of the blood vessels and consequently a rise in blood pressure, yet I have not been able to demonstrate more than slight variations in blood pressure in test animals, al-

though various lots of tinctures, fluid-extracts and proprietary preparations have been tried.

Mackenzie³ has made numerous observations on various classes of patients and refutes the idea that the administration of digitalis has a tendency to produce fatal syncope, provided the drug is stopped as soon as nausea and vomiting appears, or when the heart rate falls below 50 per minute.

When the rhythm of the heart is normal the first symptom is loss of appetite, if drug is continued, vomiting, feeling of malaise, headache, and very little diarrhoea may be reported.

Farrulener and Lyons⁵ state that the digitalis glucosides act not only on the heart but directly on the central nervous system, first stimulating it then depressing it. Cushney⁶ states that "the chief therapeutic use is to counteract certain changes in the circulation, which result in the blood accumulating in the veins in too large quantities while the arteries are less filled than usual. In cases of dilatation of the heart with a weak and insufficient systole, its action is almost specific.

"In these cases the action is very simple—the increased ventricular systole approaches the normal, the output of the heart is increased, and in some cases the dilation is diminished by the direct action of the drug. The effect is an increased velocity and pressure in the arteries and improved nutrition of the whole body."

There is no doubt that digitalis relieves distress and dropsy and has been directly responsible for numerous cures, yet it is possible that these favorable results may be attributed to some other reason than its effect on the heart, *per se*.

It is needless to say that digitalis has been given thousands of times when its use was not indicated and doubtless its failure to produce favorable results under improper conditions has been responsible, more than once, for condemnation of the particular preparation of digitalis being used.⁶ It has been repeatedly stated that analogous preparations of digitalis made by various manufacturers differ markedly in strength, that digitalis preparations rapidly deteriorate and that only the leaves of the first year's plant are active. It is no doubt true that analogous digitalis preparations differ markedly in strength,⁷ but it is very doubtful if the usual galenical preparations deteriorate rapidly,⁸ or that only the leaves of the first year's plant are active.⁹

It is possible, but not at all probable, that only the digitalis plants which are in flower are physiologically active and this need not exclude the first year's plants, as Dr. John A. Borne-mann¹⁰ has shown me a digitalis plant with plenty of flowers on it although it was a plant of the first year's growth. Certain it is that the therapeutic action of digitalis, as stated by various authors, is sadly confusing and no doubt much of this confusion is due not alone to clinical reports where digitalis was not indicated, but to the pharmacologic variability of the preparations themselves.

Chemistry of Digitalis.

Almost every pharmaceutical chemist of note has tried to isolate unchanged, the complex active principles that are present in digitalis. The great Schmiedeberg and Kiliani agreed that the four glucosides which they separated and called digitoxin, digitalin, digitalein and digitophyllin, possess a true digitalis action. They separated, in addition, other glucosides such as digitonin, digitin and digitoflavin, but they considered these decomposition products. Several carbohydrates which came from the decomposition of the glucosides, were also described.

When one looks up the vast literature on the chemistry of digitalis it is quite evident that different glucosides are sometimes given the same name by different authors and vice versa.

Recently Kraft¹¹ has contributed an admirable article on this subject and his work is now generally accepted. He claims that both Schmiedeberg and Kiliani worked with German digitalin, a commercial product made largely from digitalis seeds, hence their results are not reliable for digitalis leaves. Kraft has isolated a new active glucoside which he calls gitalin which probably has the chemical formula, $C_{28}H_{48}O_{10}$. This glucoside is amorphous, but forms a crystalline hydrate, $C_{28}H_{48}O_{10} \cdot 4H_2O$. Gitalin readily decomposes in any solvent except chloroform into anhydrogitalin $C_{28}H_{46}O_9$ which on hydrolysis, with a dilute acid in the presence of alcohol, changes to anhydrogitaligenin $C_{22}H_{34}O_8$ and a sugar which was found to be identical with Kiliani's digitoxose. Another new glucoside was also isolated. This he called gitin and is inactive physiologically. It is crystalline and melts at $265^\circ C$. It is considered similar to but not identical with Kiliani's digitonin.

Digitoxin is often considered the chief active glucoside in digitalis and chemical determinations of this constituent have

been frequently made in the hope of finding a relationship between the digitoxin content and the therapeutic activity, but the results in almost every case have proved a failure.¹² If the digitoxin from a given amount of drug is isolated it will be found that the total amount of digitoxin is very much less toxic than the amount of drug from which it was obtained, hence it seems absolutely necessary to resort to pharmacological standardization if any definite idea of the therapeutic strength is desired.

Pharmacological Standardization of Digitalis.

At least three distinctly different pharmacologic methods have been proposed for the standardization of digitalis—the frog method, the guinea pig method and the cat method.

The Frog Method.

The frog method was first proposed by Houghton in 1898. He found that “fairly accurate data could be obtained from the application of a solution containing strophanthin, digitalin, etc., to the laid-bare frog’s heart, by comparing the action of the drug thus tested with that of a sample of known strength.” After much experimental work this method was replaced by the use of a simpler one—namely, the determination of the minimum lethal dose for frogs under definite conditions. Although the original method as modified by Houghton gives quite satisfactory results, yet various workers have proposed certain changes in the conditions under which the test is to be made. For example, twelve hours was specified as being the length of time that observations should be made after injection of the frogs. As this is usually inconvenient, these observations were made after one hour or two hours or six hours or twenty-four hours. Some workers began to pith the frog at the end of one hour and make a direct examination of the condition of the heart for it was found that some times frogs would be apparently normal yet their heart had been stopped by the drug.

Dr. Hale¹⁴ observed that more concordant results were obtained when the frogs were kept at the uniform temperature of 22° C. It would neither be interesting or instructive to relate the various modifications that have been proposed for the Houghton method.

Edmunds and Hale,¹⁵ Edmunds and Cushny¹⁶ and Focke¹⁷ have specified various conditions under which the “frog test” is

to be made but none of these methods make any provision to *standardize the frogs that are used.*

It is known that variety, weight, sex, season, and temperature affect the resistance of frogs and hence it is possible to obtain different results with different lots of frogs. In order to eliminate these factors of unknown significance in any particular case, Houghton and Hamilton have suggested that a standard be used in testing the resistance of every lot of frogs, at the time the test is made. Upon these data "The Heart Tonic Unit"¹⁸ is computed in every case.

The standard they propose to use is crystalline strophanthin which is prepared from an authentic specimen of the official drug, *strophanthus kombi*, and has been studied in detail by Braun and Clossen.¹⁹ The outline of the present method as modified by Houghton is as follows:

Frogs should all be of same species, a convenient variety is the *rana pipiens*. They should all be of weights between 15 and 35 gm. and the weights should not vary more than 25 per cent. in any one assay. Before being used the frogs may be kept in any convenient place where the water can be frequently changed and kept at a temperature of about 22° C. During the test the frogs can advantageously be kept in wire cages with sheet iron bottoms, standing in trays of running water, but the depth of water in the cages should not exceed one half an inch. Scales for weighing the frogs should be accurate within 0.5 gm. The necessary apparatus consists of volumetric flasks, cylinders, graduated pipettes and a 1 c.c. pipette graduated in hundredths of a cubic centimeter and fitted with a hypodermic needle or drawn out into a fine point for injecting.

The solution to be injected should not contain more than 10 per cent. alcohol and the dilution should be made with physiological salt solution (0.85 per cent. NaCl.).

The doses are calculated on the weight of the frog, i. e., the M.L.D. is the minimum lethal dose, per gram weight of frog. For example, when the frogs are of average resistance the M. L.D. of strophanthin is 0.000,001 gm. per gram; for a 30-gram frog the lethal dose of strophanthin is .00,03 gm., which should be so diluted that this amount is contained in approximately 0.5 c.c. Several series of tests are necessary to establish the activity of any sample of unknown strength and since the frogs vary in resistance among themselves and also because of conditions more or less beyond control, the standard strophanthin must be

tested at the same time. When the M.L.D of sample and of standard are obtained the activity can readily be expressed in heart tonic units (H.T.U.) by reference to a table.

In the method just given the observations are to be made at the end of twenty-four hours, hence the one-hour method has certain advantages when several series are desired on a single sample as soon as possible. When the one-hour method is used it is necessary to not consider all frogs that have not absorbed the dose injected.

"The one-hour method.—In this method the frogs are secured and kept in the manner already described, weighed and such a dose is injected that the heart will be found in complete systolic contraction at the end of exactly sixty minutes. The drug, properly diluted so as to make a volume of 0.5 to 1 c.c. is injected into the anterior lymph sac by means of a glass pipette. Shortly before the hour is up the frog is pithed, tied to a frog board, and the heart is exposed in the usual manner. If the heart is still beating, the dose has been too small and must be increased in subsequent trials. In the first series doses are chosen with wide limits, which in a second and third series of animals are narrowed down until the smallest amount of the drug which will produce systolic standstill in one hour is found. Usually three series of frogs are sufficient to assay one preparation, but in case of any irregularity in the reaction of any of the frogs a fourth or even a fifth series may be necessary." The method of Focke¹⁷ is long and complicated and does not appear to have any advantage over the other frog methods that have been described.

Pig Method.

Reed and Vanderkleed²⁰ first advocated the advantages of using the guinea pig as the test animal although Houghton¹⁸ had previously tried pigs but considered the frog test more reliable.

The closer biologic relation of the guinea pig to man appears to be one important reason for preferring guinea pigs. It is claimed²¹ that, "frogs not only show the pharmacological action of the drug under test, but they react with so near an approach to uniformity that the medicinal value of a tested specimen can be gauged by the determination of the minimum fatal dose—for the slowing of the heart beat and the systolic emphasis produced by active heart tonics are directly propor-

tioned to the quantity of the drug administered, and under progressive doses at last reach a point which is incompatible with life."

Details of Reed and Vanderkleed Method for Testing Digitalis and Its Preparations.

If digitalis leaves are to be tested a tincture is first prepared from the sample by the U. S. P. process.

An amount of any alcoholic preparation representing one tenth of a gramme of digitalis leaves is placed in a very small watch glass and the excess of alcohol evaporated from it at room temperature by placing the vessel in a current of air. This residue is then carefully washed into a Hitchen's syringe with sufficient physiological salt solution to make the total volume two cubic centimeters.

The hypodermatic needle is previously sealed with sufficient petrolatum to prevent loss of this solution.

Two cubic centimeters of physiological salt solution is placed in the side arm of the syringe and the needle inserted under the skin of a guinea pig weighing about 250 gm.

The solution of the drug is then injected and the last portions washed under the skin with the physiological salt solution which was placed in the side arm, without removing the needle.

Great precaution is taken to inject accurate amounts and always a total of four cubic centimeters of liquid (2 c.c. of solution of drug and 2 c.c. of physiological salt).

After the injection the guinea pig is kept under close observation and evidences and time of salivation, purgation and convulsions noted. If the pig should not develop these symptoms and die within two hours another pig is injected with a larger quantity of the drug.

The tests are repeated until the amount of the drug is found which will produce the characteristic symptoms of digitalis poisoning and kill a 250 gm. guinea pig in two hours.

Post mortem examinations are always made to note the condition of the heart and dilation of the blood vessels.

In testing solid preparations of digitalis a weighed quantity of the preparation is shaken with a definite amount of physiological salt solution so that two cubic centimeters of the liquid will represent one tenth gramme of the drug. This method has been found quite satisfactory, but Pittinger²⁸ has found that

more concordant results are obtained if the time of observation is extended from two hours to 24 hours. One disadvantage to the method is that the cost of the required pigs is usually greater than the frogs necessary for Houghton's method. This objection is largely overcome by manufacturers of antitoxin who can use the pigs that have survived the antitoxin tests, for digitalis tests. These pigs cannot again be used for testing serum on account of anaphylaxis and by the time they have completely recovered from the antitoxin tests they may weigh much more than 250 gm., which is the weight specified. No provision is made for the varying susceptibility of the pigs and it is doubtful if the pig test, as it is usually carried out, will give any more reliable results than a larger number of frogs that have been "standardized" with crystalline strophanthin.

The Cat Method of Hatcher and Brodie.²⁴

This method is based upon the determination of the minimum lethal dose for cats. The cat is anæsthetized with ether and about one half of the amount of the preparation being tested necessary to kill the animal is injected directly into the venous circulation. The originators of this test have found that if preparations of digitalis or other members of this series are injected until the cat dies, the results will usually be too high, hence after twenty minutes a 1 to 100,000 solution of Merck's ouabain is cautiously injected until the cat shows signs of dying, namely, rapid respiration, which soon becomes irregular and is accompanied by convulsive movements. The ouabain should be injected in such amounts that the cat should die ninety minutes after the beginning of the test.

The "cat unit" is the amount of crystalline Merck's ouabain which is fatal within about ninety minutes to each kilogram body weight of the cat. This amounts to 0.1 milligramme of the ouabain and the number of "cat units" in one cubic centimeter of the preparation being tested is computed from the data obtained. Eckler²⁵ has reported serious disadvantages to this method, and it is doubtful if it will ever have the popular favor the other two methods enjoy.

Factors Relating to the Standardization of Digitalis.

It may easily be seen that the last word has not been said in regard to the standardization of digitalis and this unsettled

condition, in its standardization is certain to prevail until the therapeutic uses and chemistry of the drug is agreed upon.

It is true that some fault can be found with the methods we have outlined and no doubt many factors will soon be eliminated.

At the present time, it is possible to determine by physiological tests with reasonable accuracy the variability of the crude drug, the stability of its preparations, and to prepare preparations of considerable uniformity.²⁶

Other "Heart Tonics."

What has been said in regard to the methods used for standardizing digitalis apply also to preparations of strophanthus, squill and convallaria. Strophanthus seems to be more certain in its action than digitalis and can also be advantageously tested by the blood pressure method upon dogs.

Cactus grandiflorus has long been used empirically with apparently favorable results yet competent pharmacologists have reported that it has no action analogous to digitalis^{27 28}. Graeber²⁹ has recently reported the presence of both alkaloids and glucosides in this drug and publishes experiments on frogs which "indicate that cactus grandiflorus actually is possessed of an action upon the heart such as belongs to the substances of the digitalis group." In all his frog experiments the frequency of the pulse was reduced and the systole strengthened.

Sparteine sulphate is considered a drug of mediocre importance as a "heart tonic" yet Pettey³⁰ considers that sparteine is unappreciated because it is not given in sufficient doses. He recommends the use of two-grain doses as a true and reliable heart tonic, an excellent non-irritating diuretic and states it is entirely free from untoward or objectionable effects.

Work of the Normal Heart.

Few realize the vast amount of work performed each day by the heart of the normal adult. One fifth the total muscular energy of the body is used in propelling the heart and about twelve tons of blood are pumped each day.

New Methods of Observing Conditions of the Heart.

The electro cardiographic method³¹ has made possible not only the accurate diagnosis of diseases of the heart but also enables the physician to observe the effects of the medicine he has

prescribed. The practice of medicine under these conditions has become scientific, not empiric, and if uniform preparations of the "heart tonics" can be supplied, the physician needs only to consider the idiosyncrasy of the patient.

Summary.

In presenting this subject I have attempted to dwell not alone on the methods used in standardizing the "heart tonics" but the various factors that must be considered in producing reliable and potent preparations. The clinical side of the problem must not be lost sight of and when a preparation is made that will produce certain therapeutic results it is of vital importance to produce another lot having the same action. Uniformity is practically as important as potency. It is time to correct conditions when a competent observer like Faught⁸² says "Usual preparations are variable unless obtained from a reliable source. I have seen less effect follow the administration of 20 minims of a poor preparation than 5 minims of good active one." Conditions can be improved by the adoption of pharmacological standards and methods for these drugs. At the present time the manufacturers who have wisely adopted physiological standardization of their products often have different standards while those who have not adopted physiological standards have no assurance that these important drugs are even active.

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A FEW THOUGHTS UPON CHRONIC SUPPURATIVE OTITIS MEDIA.

BY

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(Read at the January meeting of the South Philadelphia Homœopathic Medical Society.)

CHRONIC suppurative otitis media is a subject about which volumes have been written discussing its various phases: necessarily then my remarks concerning the management of these cases will be presented in a very abridged form. Generally these cases are treated in a very routine fashion, each individual practitioner having his special solution for syringing the ear, special formulæ for ear drops, powders, etc. Right here is one reason for so many failures in the management of this class of cases. It is impossible to successfully treat a case of chronic suppurative otitis media unless one can determine the local condition and the reason for this will be shown. This entails at least a superficial knowledge of the anatomy of the ear, skill in aural instrumentation and proper interpretation of the local condition. Too much emphasis cannot be laid upon the importance of knowing the anatomical landmarks of the drum if one would handle successfully and safely this class of cases. To illustrate this let me relate a case: A

physician told me of a case of chronic suppurative otitis media which he was treating and gave details. I asked him where the perforation was situated. He replied that he thought it was about the center of the drum below the manubrium. He permitted me to examine the case and I was surprised to find the entire posterior fold of Shrapnell's membrane and the posterior superior quadrant of the membrana tensa gone. A probe could be passed into the additus where denuded bone was palpated. This was not a case for local treatment and had he recognized the local condition he would not have given a favorable prognosis.

Before attempting an inspection of the canal and drum, it is necessary that all discharge be removed from the canal. This requires time, patience and great gentleness, if we would inspire confidence, subject our patient to the least possible amount of pain, and cause no damage to the canal walls or intra-tympanic structures. The discharge is usually not profuse in these cases except during acute exacerbations. It is more often found to be scanty. It lies in the canal, and, adhering to the walls, dries, becomes dark, resembling cerumen. At other times it causes maceration of the epithelium lining the canal. This desquamates and a mass forms which is offensive and obstructs drainage. There is another type of discharge which when once encountered is not readily forgotten. It is present in cases where cholesteatoma masses are found in the middle ear cavity or hidden in the additus or antrum. The discharge in these cases is horribly offensive; one can detect it at a distance. Blood-tinged discharge usually indicates the presence of granulations or polypi. With a little study, a great deal can be learned from the type of discharge. Whatever be the character, it is important that the canal be free in order to accurately determine the condition of the drum and middle ear. This is best accomplished by careful mopping with cotton on an aural applicator, a tedious but important point in the examination. Where the secretion occurs in dried plaques adhering to the canal walls, a pledget of cotton, saturated with hydrogen peroxide, placed in contact for a few minutes will soften them. They can then be removed with a pair of aural forceps. The aural syringe is of use where there are masses of epithelium or where the discharge is very tenacious.

A fine silver probe is indispensable in exploration of the

field; in locating perforations, attachments of polypi, in detecting granulation, denuded bone, etc.

Interpretation of the pathological picture is of course a matter of clinical experience, and comes with repeated examinations of a large number of cases.

In every case of chronic suppurative otitis media we must determine whether it is a case which promises cure through local conservative treatment, or a case in which the patient's life is constantly in danger through extension of the process to the labyrinth, meninges brain or lateral sinus, requiring radical treatment. The history of the case will lend valuable suggestions here; for clinically cases of chronic suppurative otitis media which have had their onset in an attack of measles, scarlet fever, diphtheria or typhoid fever do not, as a rule, respond to conservative measures. We know also that certain cases of suppurative otitis media are chronic from their onset through the chronic nature of the diseases causing the ear lesion. This is notably true in cases of tuberculosis, lues, diabetes, and Bright's disease. Cases of chronic suppurative otitis media occurring as a result of fracture of the skull are usually of a severe type and tend to chronicity.

The location of the perforation is very suggestive in outlining the treatment and very careful examination must be made to determine this and the condition of the middle ear. Perforations may be divided into three classes:

1. Central perforations.
2. Marginal perforations.
3. Perforations of Shrapnell's membrane.

Perforations of the central type may be round, oval, U-shaped, or kidney-shaped. They may be large or small. They are confined to the *membrana tensa* and do not encroach upon the outer or peripheral tougher portion of the drum. Other things being equal, they constitute a more favorable class of cases.

Marginal perforations are those which extend through the periphery of the drum and involve the annulus. They may be small, involving only a portion of a quadrant, or they may involve the entire *membrana tensa*. These perforations are found in a class of cases where we are almost certain to find involvement of the bone. They offer a less favorable prognosis as regards cure by local conservative treatment.

Perforations of Shrapnell's membrane are of considerable

interest because of the discussion as to their etiology. They constitute a class in themselves. It is generally conceded, however, that perforations in this locality are suggestive of suppuration in the attic of the tympanic cavity. They deserve most careful scrutiny and observation for frequently these cases subsequently prove to be of a very dangerous type requiring most thorough radical operation.

Multiple perforations are occasionally observed and when found are suggestive of tuberculosis. Frequently, however, the small perforations have broken down and formed one large perforation when they come under our care. These perforations usually terminate in the marginal class.

Having located the perforation we attempt to determine the presence of granulations, hidden or partially hidden polypi. With a silver probe we palpate carefully for denuded bone. We look carefully for cholesteatoma and if suspicious masses are observed we obtain some of the secretion and examine with microscope.

Just a word about aural polypi. When an aural polypus is present, drainage is usually obstructed, and frequently it is impossible to determine the condition back of it. It is necessary, therefore, for two reasons that a polypus be removed: first, to determine the condition, and, second, to facilitate drainage. There are aurists who claim the presence of an aural polypus is an indication for a radical operation, but in every otological clinic numerous cases can be shown where the removal of a polypus has brought about a prompt cure of the suppuration. However, we must regard these cases as calling for very careful attention for much depends upon the duration of the suppuration and the position of the attachment of the polypus. The removal of an aural polypus is a simple operation if one have delicacy in aural instrumentation. It should be performed only after having very definitely located its attachment. A polypus may be attached to a sequestrum of the tegmen, or the outer cochlear wall. Removal of the polypus in these cases may dislodge the sequestrum, open up way for direct extension of the suppuration to the meninges or the labyrinth. After a polypus has been removed one can in a few days determine the middle ear condition and the perforation.

Given, then a favorable case, i. e., a perforation of the central type, not having had its onset in a chronic constitutional or acute infectious disease, presenting no denuded or rough

bone, or cholesteatoma,—how shall we proceed with the treatment? Why does not the discharge cease and the perforation of the drum heal? Drainage may be impeded if the perforation is small. If this be the case, then a free incision, including the perforation, will overcome the difficulty. Small or large granulations may be the cause of incomplete drainage. Careful frequent direct application of absolute alcohol or silver nitrate (ten to thirty grains to the ounce) will usually control this. If these fail, very careful light cauterization with tri-chloroacetic acid should be resorted to. Larger granulations may have to be removed with snare or ring curette.

At times a catarrhal condition of the Eustachian tube will perpetuate an aural suppuration. This type of case will often be suggested by the position of the perforation, namely, in the anterior upper quadrant of the *membrana tensa*. These cases call for the most careful examination of the nose and post-nasal space and faucial tonsils. Obstructive conditions in nose should receive necessary attention. Adenoids, masses of granular tissue in the fossa of Rosenmüller, or adhesions here must be removed. The posterior ends of the turbinates, especially the inferior, if enlarged will prevent a clearing up of the Eustachian condition. Large diseased faucial tonsils should be removed. Having removed a possible perpetuating cause in the nose, naso-pharynx or pharynx, the treatment directly to the tube will be effective. Silver nitrate, one per cent., or argyrol, ten per cent., applied to the Eustachian tube by means of Yankauer's Eustachian applicator has given us good results. In very old cases where we can satisfy ourselves that the middle ear is being re-infected through the tube, obliteration of the Eustachian tube by destruction of the mucous lining has been recommended. This is a delicate procedure and requires considerable skill and knowledge of the anatomy.

In cases where we have a large central perforation the edges may become adherent to the inner wall of the middle ear. Thus pockets are formed in which secretion lodges. This condition must be met with by keeping the edges free.

In some cases the discharge diminishes and the perforation though small will not close. This is frequently due to the epidermis creeping over the advancing edges of the perforation and thus preventing further growth. Careful cauterization of the edges of the perforation with tri-chloroacetic acid will overcome this.

The possible conditions occurring in chronic suppurative otitis media are so varied and numerous that it is impossible to describe them in a short paper of this type. I have merely mentioned the most common conditions met with.

A very important question in the treatment of this class of cases is how shall the discharge be taken care of? It is very necessary that some means be provided for keeping the secretion from damming up the canal and causing secondary lesions; thus adding to the annoyance of the patient and increased difficulties for the physician. You have all seen the excoriated auricles in children with running ears. In adults and also younger subjects, small furuncles occur in the canal as a result of a middle ear discharge. The use of the aural syringe in producing cleanliness has been much abused. Too often ears are irrigated without definite indications. Again the use of the aural syringe is frequently entrusted to hands totally incompetent to handle the same. It is practically impossible for a patient to properly syringe his own ear and it is folly to hope that a patient's ear will be irrigated successfully unless definite instructions are given the person who is to do the syringing.

In the first place it is necessary that the things used in syringing the ear be sterilized; the person syringing the ear must have clean hands. This can be carried out and will be if the importance is presented to the patients. The solution to be used should be sterilized and reduced to body temperature. We have not found strong antiseptic solutions of any benefit in the ear; they are more liable to do harm, in the way of causing a dermatitis. We have found that a saturated boric acid solution or normal saline solution accomplish the end. How often should an ear be irrigated? This can be answered by stating, sufficiently often to keep the canal free of discharge. This may be once a day or more frequently. In irrigating an ear the auricle should be grasped in one hand and traction made upward, backward and away from the head. (In children directly outward.) The nozzle of the syringe should be inserted into the canal and a gradually increasing force used. After the return flow is clear, have the patient hold the head to the same side for a minute or two in order to drain the canal of all fluid. If this little point is not observed, quite an amount of fluid remains in the canal and this proves a very favorable media for bacterial growth.

The ideal method of keeping the canal and middle ear clear of discharge is by careful mopping under illumination. This entails expenditure of time in the case of dispensary work and expense in private work. If this can be combined with the introduction of a small gauze wick in the canal, the discharge as it recurs is taken up by the gauze and is kept away from the diseased area. Surprising results are accomplished under this treatment. The gauze wick is removed every day or every other day, depending upon the amount of the discharge.

The instillation of ear drops usually accomplishes very little. We have found that when medication is required in the middle ear, the best results are obtained by making direct application with cotton tipped probe. Occasionally where granulations are stubborn we will have the patient use spiritus vini rectificatus, starting with fifty per cent., and gradually increasing the strength. Zinc sulphate is used where the perforation is free and there is present a pure mucous discharge. The strength of the zinc should be from one half to five grains to the ounce. To properly instill drops in the ear it is essential that the patient assume the recumbent position on the side with the affected ear up. The canal should be filled with the medicament and patient remain prone for several minutes.

Cases of chronic suppurative otitis media presenting marginal, or Shrapnell perforations, actively suppurating, presenting recurring polypi or uncontrollable granulations, or presenting cholesteatoma, or evidences of same, facial paresis, one-sided temporal headaches, especially on the affected side, are cases in which procrastination is dangerous. This is particularly emphasized if we have a history of attacks of pain occurring in the mastoid region, or attacks of vertigo whether they be rotational or otherwise. Such cases demand radical operative interference in order to remove the danger of intra-cranial involvement. Within the last month we have had four cases of intra-cranial complications of chronic suppurative otitis media. One case of temporal lobe brain abscess who came to us and was advised to have a radical mastoid operation because of a polypus attached to the tegmen and the existence of a facial paresis. There was unmistakable evidence of necrotic bone back of the polypus. He refused operation. One month later he was brought into the hospital in coma. Operation revealed an unencapsulated brain abscess. Another case, a boy of nineteen years, had been under our care for three years

for chronic suppurative otitis media. Two years ago I advised a radical mastoid operation because of marginal posterior superior perforation and recurring polypi. He repeatedly refused operation. Three weeks ago he developed a suppurative labyrinthitis and had to be operated in a hurry. Two cases in two little girls, eight and ten years. Both had chronic suppurative otitis media following measles. Both were admitted to the hospital with meningitis. A fifth case was operated Friday, January 16th. This boy of 14 years had had a head injury several years ago. At that time he developed a running ear. He came to us five weeks ago with a polypus protruding beyond the external auditory meatus. This was removed and back of it we found a polypoid condition everywhere. No landmarks were discernible but bone was palpated posteriorly. He had been having constant temporal headache confined to the right side. Operation revealed a mastoid filled with cholesteatoma, the dura exposed above and the lateral sinus posteriorly. The posterior wall of the canal had been eroded so that it was but a very thin partition between the antrum and canal.

Every aural surgeon can cite numerous instances of intracranial lesions resulting from chronic suppurative otitis media and in view of these clinical facts, it is well to consider a discharging ear as a menace to life until proved otherwise.

The cases of intra-cranial complications occurred in the service of my chief, Dr. Gilbert J. Palen, to whom I am indebted for the privilege of mentioning them.

AFFECTIONS OF THE LACRIMAL SYSTEM.

BY

PERCY A. TINDALL, M. D., PHILADELPHIA.

(Read before the Philadelphia Society for Clinical Research.)

THE lacrimal apparatus consists of the lacrimal gland, which is the secreting part of the system; the puncta, the canaliculi, the lacrimal sac and the nasal duct constitute the excreting part of the system.

The lacrimal gland is comparatively seldom involved in a pathological sense so we will confine our discussion to the drainage system or those parts that carry the tears from the eye to the nose.

Normally the tears will flow or follow the course from the lacrimal gland in the upper outer quadrant of the orbit and pass toward the puncta at the inner canthus and the result of winking will be sufficient to cause them to enter the puncta through the canaliculus into the lacrimal sac and from thence into the nose.

There are two puncta, one on the upper lid and one on the lower lid, about seven millimetres from the inner angle of the lids and each having a separate canaliculus which leads to the lacrimal sac, either separately or they may join together to form a common duct just before entering the sac.

The lacrimal sac might be termed the upper enlarged or dilated part of the nasal duct and is possibly eight to ten millimetres long and about six millimetres in cross section, resting in the fossa of the lacrimal bone and extending upward slightly above the entrance of the canaliculi. As the sac enters the nasal duct it forms the narrowest part of the duct which has an average length of twenty millimetres and a cross section of four millimetres. It narrows again at the entrance to the nose in the inferior meatus about two centimetres from the vestibule of the nose. The general direction of the duct is downward, backward and outward.

Normally there are only enough tears formed to keep the eyeball moist, but the lacrimal gland is so sensitive to the slightest influence such as various emotional or neurotic disturbances or stimulated to action from irritation of various sorts as foreign bodies in the eye, colds affecting the eye or nose, etc., that in manifold ways many times a day is the excretory portion of the lacrimal system called into use. Even at times under normal conditions of the drainage system will there be an overflow of tears due to an excessive stimulation of the lacrimal glands from some emotional disturbance. The system is of course not sufficiently capable of relieving a flood on short notice. In the same way the drainage system of our own city occasionally overflows when subject to a sudden downfall of rain.

Any obstruction to the entrance of tears into the nose will cause the very annoying symptom of epiphora or overflow of tears. Outside of excess of tears from a stimulation of the lacrimal gland epiphora is caused by a congenital absence of the puncta and canaliculi, which is comparatively rare or to a contracted puncta which is comparatively frequent in periodic

cases of epiphora or to strictures or growths in the canaliculi or to atony of the walls of the lacrimal sac or to polypoid formations in the sac or to obstructions or strictures in the nasal duct. This latter condition being the most frequent cause interfering with the proper function of the drainage system. The mucous membrane lining the duct, the sac and the canaliculi is merely an extension of the lining membrane of the nose. So again you can readily see that the majority of cases of stricture or obstruction can easily occur from changes in the nasal membrane.

The conditions that may cause epiphora from displacements of the puncta are the results of injuries especially burns of the lid and conjunctiva, chronic conjunctivitis or blepharitis, senile ectropion or paralysis of the facial nerves, etc., and as before stated there may be a congenital absence of the puncta and canaliculi—two cases of which we had at the Hahnemann dispensary last winter.

Some of these conditions can be relieved by very simple measures, but when operative measures are necessary a more serious problem presents itself. The habit of many people of wiping tears downward pulls the lower lid away from the ball and after awhile the continuance of such a habit tends to produce an ectropion, especially liable in those with decided laxness of the palpebral tissues.

Strictures of the canaliculus are rather rare, but we have had several cases at the Hahnemann dispensary lately showing involvement of the canaliculus and in each case the stricture was close to the sac entrance and was a firm fibrous encroachment on the lumen of the canal. Should this be the only involvement of the system perhaps no epiphora would occur as the upper duct would carry off the normal supply of tears provided the upper duct would enter the sac as a separate channel.

Occasionally the sac itself is involved but as a rule always secondary to some other condition, such as trachoma, the infection spreading from the conjunctiva or a tuberculosis of the sac originating from lupus of the nose. In the latter class of cases Darier states that a very prompt cure can be obtained by injecting a one or two per cent. solution of guaiacol into the lacrimal sac every day. Cases of trachomatous infiltration of the sac have been known to clear up under ordinary methods of treatment with the improvement of the conjunctival

condition. Another sac involvement occasionally met with is a form of polypoid growths affecting the wall of the sac. The most frequent cause, however, of epiphora is stricture or obstruction of the nasal duct and all authorities agree that the great majority of all such cases have their origin in the nasal duct and then as a direct result of changes in the nose, such as, hypertrophic or atrophic rhinitis, polypoid formations or malformations of the inferior turbinated bone.

The most simple form of nasal duct obstruction is that produced when a patient has a severe cold in the head, causing congestion of the nasal mucous membrane and at times this causes a temporary closure of the outlet of the duct. A little pressure over the sac at such times will cause to regurgitate a clear fluid. Repeated similar attacks cause changes to occur in the membrane of the duct which may eventually develop into conditions affecting the lumen of the canal. Treatment instituted at this time or rather before the strictures develop, would very likely in many cases prevent the changes from affecting the lining membrane of the nasal duct.

Should a stricture develop, of course the result would be to cause a retention of the tears in the sac. The second change to occur following this would be for the character of the retained secretion to be changed to a mucoid or muco-purulent material, lying constantly in contact with the sac walls and providing a most excellent pabulum for the growth of organisms, the most commonly found being the pneumococcus. The epithelium lining the sac loses its cilia and desquamates leaving the sub-epithelial tissue open to infection. This stage would be termed a chronic dacryocystitis or a blenorrhoea of the sac and may exist for a long time, without infecting the surrounding tissue. Should infection occur, however, by the organism passing through the sac walls into the surrounding tissue, symptoms of acute inflammation immediately develop and we have an acute dacryocystitis. Should our treatment in the way of endeavoring to abort the inflammation fail, supuration will develop and shortly break externally just below the internal canthus and a fistula forms which may become permanent.

The treatment of these various conditions resolves itself into measures that will restore the patency of the canaliculi—the sac—or the duct. When the epiphora is caused by a con-

tracted puncta, the use of a conical sound to dilate it and the proximal end of the canaliculus frequently for a number of times, will generally result in a relief of the symptom. It is particularly in these cases that we will find some refractive error as being the basic cause of the trouble and correction of that with the treatment of dilatation should ensue. If polypoid formations develop in the sac, the only line of treatment there would be in extirpation of the sac. Should a bony deviation or an exostosis cause pressure on the nasal duct, occluding it, the method of choice would be in removing the sac, although some operators have corrected or removed the deformity and thus restored the patulency of the canal.

The treatment of strictures of the nasal duct is quite varied, but by far the greater number of operators, I believe, prefer and depend upon the gradual dilation of the strictures by means of graduated probes. The canaliculus of the lower lid is slit up about one half of its length and then the largest probe that the canal will accommodate is used and only gentle pressure made so that a false passage will not be made or the tissues lacerated. When resistance to the further progress of the probe is quite firm, we must desist from making more pressure and the case allowed to wait till the next day when the same probe will probably enter the duct further or possibly all the way. As the case progresses larger probes are used until we can readily pass a probe of the size No. 6 of the Bowman variety, which in the great majority of cases will be all that is necessary.

In an article by McEnry Brown in the *Annals of Ophthalmology*, April, 1910, he approves of rapid dilatation of the duct with the large probes of Theobald up No. 12 or No. 13. He also approves of intranasal operations, removing the anterior end of the inferior turbinal to expose the nasal end of the duct. If the duct is inclined to close after such methods he advised the use of styles and then as a last resort or if the stricture is osseous, extirpation of the sac is advised. Theobald, of Baltimore, is the author of the method of using probes of large size up to numbers 16, which is a very large probe indeed and, in my opinion, unnecessary and in many cases harmful for the pressure required is considerable and laceration of the mucous membrane sure to follow.

Priestly Smith, of England, strongly advocates the use of styles in chronic dacryocystitis. He criticizes the increasing

frequency with which the lacrimal sac is removed and also does not approve of the frequent and long continued use of probes. He states that for some time he has been using styles in practically all of his cases and with satisfactory results. He uses styles made from pure silver wire, freely pliable and bent to the shape of the duct, with the upper end or crook sufficiently long to fill the entire length of the slit canaliculus where it will be hidden. These may be worn for months and sometimes years without trouble.

Fergus, of Glasgow, in an article in the *Ophthalmic Review* of August, 1911, believes that in practically all cases of dacryocystitis, extirpation of the sac is the only efficient means of treatment. He strongly protests against the method of slitting up the canaliculus before probing as well as against the use of either the large or small probes for any length of time. He thinks it justifiable to use moderate sized probes through the uncut canaliculus followed by irrigation of the sac and duct, but the length of time usually required to effect a permanent relief is so long, that in his opinion extirpation of the sac is the logical procedure.

Darier, in his work on *Ophthalmic Therapeutics*, advises the use of the moderate sized Bowman probes and also the use of electrolysis, using the negative pole in connection with the probe in the duct and a current of 4 to 6 milliamperes for a period of five to ten minutes at a time. At the end of probably two minutes, while continually making gentle but firm pressure on the probe, one can often feel the stricture gradually soften and permit the passage of the sound, which, of course, is insulated except at the point of contact with the stricture.

As you see by quoting these various writers, opinions differ radically regarding the method of procedure. Each one has some special method to follow and in the hands of the originator of any particular method of procedure, success will often follow his cases, which is not the case always when attempted by others. Any condition or class of cases that we might say are always present to a greater or less degree, will have a great number of methods originated tending towards its eradication, but I believe that the general opinion favors the method that has been in vogue for many years, namely, the use of graduated probes, with the addition in suitable cases of galvanism.

My own experience, both in hospital and private work, has been that only in the exceptional cases is removal of the sac in-

licated or necessary. While it appears to be the ideal method of procedure, very good results can be obtained by other less radical methods, which possibly have the drawback of requiring a little more time, but decidedly more pleasing to the patient. With the use of the probes of moderate size it is only in the exceptional case that relief from the symptoms can not be obtained in comparatively few treatments at close intervals and in some cases an occasional probing at long intervals. I had intended showing this evening one of the exceptional cases, but the patient has not materialized. It is a condition of marked deformity of the nasal septum making pressure on the turbinal and very likely causing a malformation of the nasal duct or possibly an exostosis as it is impossible to enter the probe more than about half the distance, when it comes in contact with a bony obstruction. Such a case, of course, requires the radical method to give relief.

In cases of blenorrhoea, generally those of long standing, due to degenerative changes in the epithelial lining of the sac, the micro-organisms find comparatively little hindrance to their penetrating the sac walls and infecting the surrounding tissue in quite a number of cases and we then have an acute dacryocystitis, which will very likely go on to suppuration. At this time we must not endeavor to pass a probe as the swelling and general inflammatory reaction would destroy the anatomical relationship. We must endeavor to abort the probable suppuration by means of cold compresses and the indicated remedy, which in some cases will avail. Should the condition go on to suppuration, incision must be made over the point of fluctuation and the fistula kept open until the inflammation subsides. Then treatment with the probes is in order and as soon as the nasal duct is restored, the fistula will in the majority of cases close. If the fistulous opening has been present for a long time, its tract may have become lined with epithelial tissue and if such is the case, it must be destroyed by means of the actual cautery or by curettement.

PROPHYLAXIS OF PUERPERAL INFECTION.—Schweitzer (Leipzig) has given renewed attention to the use of lactic acid irrigation of the vagina on pathologic vaginal secretion in pregnant women, one-half per cent solution being used. From this treatment the cocci flora rapidly gave place to the normal bacilli. The puerperal morbidity in such cases fell from 30-40 per cent to 10 and 7.3 per cent. In a number of cases having normal secretion the morbidity was 7.1 per cent, therefore approximately the same.—*Zentralbl. f. Gyn.*, 1913—923.

**MORAL DEGENERACY AND TREPHINING, WITH ESPECIAL REFERENCE
TO NYMPHOMANIA.**

BY

H. L. NORTHROP, M. D., PHILADELPHIA.

(Read before the Atlantic City Homœopathic Medical Club, April, 1913.)

I KNOW I am not a neurologist, nor an alienist, but quite likely I am a fool, treading where angels fear to venture. However, even if I come to grief, my efforts will give me an opportunity to report what to me were very instructive cases, and to express the belief that there is a large and growing field for the surgical treatment of altered mental functions, summed up, for the present, under the title of moral degeneracy. "Mens sana in corpore sano" is just as true to-day as when uttered by Juvenal in the first century. Juvenal prayed for a sound mind in a sound body, and Dr. Johnson said that "every man is a rascal when he is ill." I will paraphrase these words of the great moralist by saying that every man is ill when he is a rascal. (And I think I prefer the revised version to the original.) Indeed, if we follow the example of the Great Physician we will heal the mind oftentimes in preference to the body. The miracles wrought by the intelligent administration of drugs, the victories over accident and disease achieved by surgical measures, epoch-making though they be in importance and in value of results obtained, cannot outshine an operation which will convert the sinner, cure the kleptomaniac, purge man's character of vice and debauchery, estrange Dr. Jekyll and Mr. Hyde, and restore man to his inherited honor of "the apex of creation." You ask the question, "Can this be done?" History answers, "It has been done." And history repeats itself.

Do not accuse me of offering you a picture too rosy-hued, one too filmy and nebulous for realization. The millennium is not yet in sight and will not be precipitated by anything I may say in this humble contribution to medical literature. The fact remains that some moral degenerates can be morally bettered, or, perhaps, cured, by a properly and intelligently applied surgical procedure. This has been made possible by a more or less accurate, practical knowledge of the location of man's mental functions, a part of the art of phrenology whose fun-

damental principles, widely accepted to-day, unite the anatomy and physiology of the cerebrum and cerebellum intimately and harmoniously. Right here we should recognize the credit which belongs to pathology in determining and locating so many hitherto obscure cerebral functions and nervous phenomena. Injuries of the head, hemorrhages, tumors and inflammation within the cranial cavity, by resulting in altered sense and nerve performances, and whose exact location and extent were discovered by operation, or oftener by postmortem, have piled up a wealth of neurological data and have thrown much light on both the anatomy and physiology of the whole nervous system. Even the opponents of phrenology must concede that the skull is subservient to the brain, that it is moulded upon and fitted to the brain, whose shape and size determine, aye, fix, the shape and size of the skull. This anatomical fact alone has helped materially to place cerebral localization upon its substantial basis to-day. In many cases the lesion can be definitely located and is superficial, cortical, and frequently can be removed.

I say "can be definitely located." This is made possible by an application of the well-known rules of cranio-cerebral topography and localization, and by recognizing, accepting and employing the principles and discoveries of the art of phrenology, whose value has undoubtedly been greatly underestimated as a helpmeet to the surgery of the brain. In work of this special character I have looked upon it as my duty to obtain the co-operation and support of one of the neurologists of my acquaintance, and I have received valuable aid in examining my cases and in diagnosing and locating the lesion believed to exist and to be responsible for the moral imperfection, from Doctors Bayley, Tuller and Hicks. One or another of these gentlemen has contributed the neurological findings contained in my reports.

My experience with this class of cases has necessarily been limited. The results of my work have been such that it is with pardonable pride that I speak hopefully and encouragingly of the possibilities of surgical cure in at least some of these deplorable cases. The efforts of the Philadelphia *Evening Telegraph* to reduce and limit the number of imbeciles and moral degenerates of the land need not deter any neurologist or surgeon from carrying on his studies (and experiments, if you insist), in those unfortunates who need something more

and something better than the average home or public institution can possibly afford. Of course it is understood and accepted that the majority of subjects classed as moral degenerates cannot, by any means known to man, be regenerated in mind or morals, but it is my personal belief that the minority of those cases under discussion, i. e., those who can be morally benefited by surgical operation, is larger than at first sight appears.

At the present time my experience along this particular line has been with six cases. Some of these cases were unpromising from the beginning, and the study of the case and the operation were undertaken at the earnest solicitation of parents and with the full consent of the patients, all of whom were of age and fully cognizant of their moral defects and of the uncertain and doubtful results of surgical treatment. As I review these cases, although all patients made a complete recovery from the surgical interference and were none the worse for it, perhaps at least two of them should not have been operated upon.

CASE I.—B. G. C., age 22 years. When five years old, fell off of a fence, striking back of head. At the age of 15 began to smoke, drink and steal money; later, he forged checks and exhibited a general, criminal tendency; is incorrigible; is a kleptomaniac; other brothers and sisters normal. No home, school or institution influence seemed to have any control over his habits.

Examination of his head showed a large scar in the right parietal region, posteriorly, $8\frac{1}{2}$ inches behind the glabella.

My operation, performed January 18, 1909, consisted in the breaking up of extensive, widespread adhesions of the dura to the underlying arachnoid and pia, beneath the old scar.

This man's recovery was uninterrupted and under date of April 26, 1913, he wrote me as follows: "While I cannot assure you of the success of your operation upon my head, preferring to leave that question to others to decide, I will say that at the time of the operation I was a pretty good example of the intemperate man. I have long ago given up all drink and this, along with the operation, has helped me to develop a good, strong will power. You know, and I have found out since the operation, that a full recovery from a habit of intemperance is practically impossible unless a man places something in its stead,—the brain faculties will not develop under reverse conditions any more than a fellow can gain self-respect

by associating with crime. I am feeling better in every way and this, along with my present work, gives me a chance where I had none while under the control of drink and an un-repaired fracture of the skull."

(This patient is employed at "The Self Master Colony," Union, New Jersey, rescuing fallen men from a life of crime and immorality.)

CASE 2.—Miss L. H., age 24 years. Forceps delivery with injury to head; walked when 10 months old, but fell frequently, then did not walk until 18 months old. Did not grow after 13 years of age; is nervous. Scar and bony depression above hair border to left of median line.

Dr. W. D. Bayley, to whom I referred this patient, reported as follows: "I am of the opinion that there was a cortical, or an extradural hemorrhage at childbirth over the left Rolandic area, especially over the arm center, which has caused the partial hemiplegia and resulting athetosis. She has decided choreiform twitchings, especially of the right side of the face, but I do not feel that this is a genuine chorea. I advise an exploration of the Rolandic region on the left side, and either after, or before, a careful refraction to remove eye-strain which, in itself, I have known to keep up a chronic choreiform condition."

At operation I removed the depressed part of the frontal bone, uncovered a very thick dura, beneath which were adhesions, an œdematous pia, and pale, sodden, unhealthy-looking frontal convolutions. This girl's eyes were refracted later and a compound hyperopic astigmatism, of moderate degree, was corrected.

A letter received from this patient's father, in March, 1913, states that his daughter was not benefited at all by my operation, that another doctor has lately found all of her trouble to be located in her spine, and that she is improving under his treatment.

Permit me to present to you the essential facts of interest associated with two other cases by quoting from papers previously written and published by me.

• LOST MORAL RESPONSIBILITY.

T. L., male, age 48, had always been a man of good habits, was kind and devoted to his wife and children, and occupied

a position of trust and responsibility in a large railroad company. He earned a good salary and was well thought of in the office of the company. He never drank whisky or alcohol in any form. In May, 1891, a piece of heavy timber fell a distance of 16 feet from the upper structure of a float-bridge, striking him on the head and causing a contusion of the scalp and a hematoma in the upper frontal region, close to the middle line on the right side. He was unconscious for about 60 seconds. After a convalescence extending over a period of three weeks he returned to his position in the railroad office and remained there for twelve years, when he was discharged for drunkenness and misuse of the company's funds. He now stayed away from home for many days at a time. Remember, he never drank before his accident: now he disposed of at least a quart of whisky daily,—never less than a quart, he said, and sometimes it was three pints. At the same time he began to spend money lavishly and helped himself abundantly to the company's funds. His accounts were audited frequently and always found correct, but his trick was to have enough worthless bogus checks in the drawer to cover the amount which he had withdrawn and spent, on several occasions amounting to three or four thousand dollars. After being discharged by the railroad company he went to Cincinnati and easily secured a first-class position with a railroad company there, but lost it in about a year by reason of his old habit of drink and misuse of the company's cash. To quote his own words, given me after his operation: "I looked upon money and the spending of it as a thing which I was not responsible for; I spent it right and left, I may say, I threw it away, and because I did not have enough of my own I helped myself to that which belonged to the company. And yet I did not think that I was doing anything wrong,—I felt that everything would come out all right. After drinking three pints of whisky a day and retaining every bit of it (I never vomited) I would get up the next morning feeling well and without headache or gastric disturbance. Most of this happened during the last three years before my operation." The patient himself summed up the effects of his head injury when he said that he had all of his faculties *except his sense of moral responsibility*.

Dr. John J. Tuller, who examined this patient, stated that he believed the man's moral degeneracy was due directly to the head injury above referred to, and that an operation should be

done to remove whatever lesion might be found affecting the upper part of the right frontal lobe. My operation, performed in January, 1907, did not reveal any depressed bone or evidence of fracture at the site of the previous injury, but the dura was tightly adherent to the inner table of the skull and all three meninges were glued together over the right frontal lobe. The cerebral cortex appeared normal. I destroyed the adhesions between the dura on the one hand and the arachnoid and pia on the other, stitched the flap of dura lightly in place and closed the wound.

This patient is now devoted to his wife and children, has drunk no whisky and says the thought of taking a drink never enters his mind. He afterwards returned to the employ of the company for which he originally worked, and was promoted twice with an increase of salary each time.

The history of this case impresses me with this fact: the undoubted direct effect of the head injury on this man's moral character. Never before given to drinking, thieving and a total disregard for his responsibilities as a husband, a father, a brother, and a trusted employe, after the accident he let go, full sheet to the wind; he was on the crest of the wave of exaltation; he did not and could not appreciate the wrong in what he was doing. He had lost his sense of moral responsibility.

Hollander and Combe, of phrenological fame, locate *the centers of exaltation, of hope and of optimism in the ascending frontal convolutions*. Here, also, in the lower third of these convolutions, are placed the motor centers which govern the muscles of expression including, of course, those which act upon the mouth and produce, by their contraction, the expressions of satisfaction and of pleasure, of cheerfulness and of joy. Such are the facial expressions one would expect to find on the countenance of an optimistic individual, and they are strongly allied to the mental state of hopefulness and exaltation which, in turn, might naturally be accompanied by an utter disregard for moral restraint and moral responsibility.

KLEPTOMANIA.

Gall, a world-wide authority on phrenology and discoverer of many facts relating to the anatomy and physiology of the nervous system, years ago observed, on his visits to asylums

and prisons, that men given to stealing presented a very prominent anterior temporal region. Gall, Hollander and others have reported many cases of kleptomania, in all of which a pathological lesion involving the anterior part of the temporal lobe on one or the other side (usually the left) existed and was demonstrated either ante- or postmortem. This lesion was perhaps in the nature of a bulging of the perieto-temporal region, due to an irregularity in the contour of the parietal and temporal bones, or was a cortical cyst in the temporal lobe, possibly with other changes such as softening and degeneration of the surrounding brain tissue, hemorrhagic effusions, adhesions, etc. This temporo-sphenoidal lesion and kleptomania appeared to bear a close relationship to each other, so direct and positive as to lead Hollander to conclude that *the temporo-sphenoidal lobes are in some way connected with the propensities common to man and the lower animals, while kleptomania and voracious hunger and thirst, he has demonstrated, are faculties associated with the anterior part of these temporo-sphenoidal lobes.*

And now permit me to quote from my previous paper on "Kleptomania," that my effort on this occasion may be as complete as time will permit me to make it, and that it may be worthy of the Club whose guest I have the honor of being to-night.

Margaret G., age 13 years, when 18 months old, while her mother was confined to bed by a serious illness, fell from a child's high chair and struck on the corner of a kitchen stove, receiving a dislocation of the left shoulder-joint and a head injury, also on the left side. When 10 years of age her kleptomaniac tendencies became manifest. She stole her mother's glasses and hid them; she stole her grandfather's pocket-knife and threw it over the fence into the adjoining yard; whenever she got hold of a piece of money she would hide it for a while and then spend it. (Kleptomaniacs usually hide and hoard their stolen goods.) In school she stole from the girls and boys and teachers and the habit became so aggravated and obnoxious that she was expelled from the school. When scolded for her theft she would always drop her eyes, then glance up and smile and say, "I could not help it, I had to take them." An examination of her head showed slight but perceptible and positive fullness above and in front of the left ear. After her hair had been removed and her head shaved, this localized

fullness showed plainly. Believing this case to be one of kleptomania resulting from pathological changes in the anterior part of the left temporal lobe, this lesion in turn being due to the head injury received in childhood, I advised surgical treatment. Before operating I sought the advice of Drs. Bayley and Hicks, who corroborated my diagnosis and sanctioned my proposed plan of treatment.

On November 30, 1908, I opened Margaret's skull in the left anterior temporal region, making a U-shaped flap, base downward, of scalp tissues and temporal muscle. This exposed a very irregular temporal fossa, deeply indented in front where the squamous part of the temporal bone sutures with the greater wing of the sphenoid. This acute depression lay directly over the anterior extremity of the temporal lobe of the brain, while just back of it the squamous bone bulged outwardly, and which was the cause of the fullness observed before operation. I next removed the floor of the temporal fossa over an area two inches, anteroposteriorly, by one and one half inches, vertically, including the entire portion of depressed bone. I incised the dura around the margin of this bony aperture and gave escape to more than the usual quantity of cerebro-spinal fluid. Adhesions were found between the meninges covering the apex of the temporal lobe. These I destroyed with a dural separator. I did not disturb the cortex; it appeared dull and soft (flabby). The dural flap was next sutured in position and the rest of the wound was closed in the ordinary way. When first permitted to be out of bed this patient began to play her old kleptomaniac tricks, and one of the nurses reported that she had stolen articles from the supply closet. No attention was paid to this, however, and the child did not repeat it during the remainder of her stay in the hospital, nor has she stolen a thing since to the knowledge of her parents or teachers. She is now employed in Wanamaker's department store, where she holds a position of some trust and responsibility and which she has filled for a considerable period of time.

REPORT OF TWO CASES OF NYMPHOMANIA.

CASE I.—Miss P. S., aet. 23 (referred to me by Dr. Franklin Powel). General neurological examination made February 29, 1912, by Dr. W. L. Hicks. History from sister. Born at full term, no instruments used, ninth child, all other chil-

dren normal. Walked at the usual age; teeth at the usual age. At the age of four years fell, striking back of head on stone step, the scar from which still shows. Went to school at the usual age, but was very disobedient at school and was expelled several times; progressed with the class but was always bad. Had very abnormal temper; threatened to kill members of the family; easily became excited and would never apologize. At the age of 11 had frequent sexual intercourse; at the age of 13 had intercourse with five different men in one day. Has left home and stayed away for several days, usually leaving town and staying in some house of prostitution where she has had intercourse with as many as ten men a day. She also stole money from members of her family, and paid men to spend the night with her. History from patient: Has had general, severe headaches for several years with tinnitus and diplopia and marked vertigo. At the age of twelve she had regular intercourse with three different men weekly. For many months has had intercourse one or more times daily. For long periods she would go out and solicit any man who would attract her. No sexual perversions. Has had as many as ten men in one night, and has had an orgasm with about half of them. She has never had intercourse for money but has had several presents given her. She began to drink heavily and to smoke two years ago and says she has always more sexual gratification when she has been drinking. Has been pregnant twice.

Physical examination: Pupils equal, normal in size, react well to light and accommodation, ocular muscles normal, lateral nystagmus present on fixation to the right, ptosis of both lids worse on the right. Flattening of the left side of face; tongue O. K. Fine tremor of hands, patella reflexes exaggerated and equal. No clonus; muscular force good, grips, right 10, left 8. Is left handed. Weber referred to right ear; scar in the upper right occiput about one inch long.

Operation upon Miss P. S. March 5, 1912. Under ether anesthesia and the patient in the prone position a semi-circular flap was outlined in the occipital region with its base directed upward. The bone over the right cerebellar hemisphere was removed, a flap of the dura turned back and a section of the entire thickness of the cerebellar cortex one inch long and five eighths of an inch wide was excised. The dural opening was closed and the wound sutured without

drainage. I next turned up another flap including the scar in the upper right occipital region and found the bone underneath to be depressed. This depressed area was then removed by trephine and rongeur forceps; the dura looked to be normal and I did not open it. The operation recovery was prompt and the wound healing was perfect.

The day after the operation, the first thing that the patient said to me was, "I want to go home to my mother. My sisters want to send me out in the country, but I want to go home to mother and live with her." Shortly before her operation she had threatened to kill her mother. Before leaving the hospital, in answer to a question put by Dr. Hicks, this patient declared that she had lost all sexual desire. Under date of October 3, 1912, her family physician writes: "The pleasure is mine in being able to report that Miss P. S. has had no relapse whatever. She is a totally different young woman, and her sister just told me that they are delighted with her conduct for the past eight or nine months,—they could not ask for anything better. She is now truthful, which could not be said of her before her operation."

Post-operative report, on November 13, 1912, by Dr. Hicks. Has had no intercourse; has no sexual desire; mentality good; is physically well.

This patient called at my office recently (February, 1913,) and solemnly stated that she has relinquished her old haunts and habits and has refused immoral offers from the opposite sex repeatedly since I operated upon her head.

Inquiring of Dr. Franklin Powel in October, 1913, regarding this patient's condition, he replied as follows: "In answer to your favor of the 24th inst., I regret to say that P. S. went back to her former habits after doing well for over a year succeeding your operation. She caused her people so much anxiety that on September 11, 1913, she was committed to the State Asylum at Norristown, Pa., as a degenerate and feeble-minded. I saw her sister recently and she tells me that P—— is quite contented in the asylum, thinks it the finest place she was ever in, and does not manifest any symptoms of her old disease."

I am giving the latest report of the actual condition of these patients, and I feel that I am entitled to say that P. S. was permitted to live in the same environment, associate with her old companions and frequent her old haunts, moving pic-

ture places and saloons, after her operation as before it, although Dr. Hicks and I strongly urged the girl's relatives to remove her far away from her old surroundings. If this had been done, perhaps the success of the operation would have been even more signal and complete. At the Norristown Asylum we are told that the patient gives no trouble whatever, of any kind.

CASE 2.—M. L. P., aet. 44, referred to me by Dr. Jas. M. Godfrey. General neurological history taken by Dr. Hicks on May 4, 1912.

Has complained all her life of spinal irritation for which she was treated by braces, wearing them for five consecutive years at one time. She feels that she has always been peculiar and different from other people and she attributes this feeling to prolonged nursing of her father and mother. She says that she is degenerating into a "fool." When she was ten years old she and her cousin, who was then 18 years of age (male) practiced masturbation with each other and also alone. This was persisted in for many years, even after he had married. She had regular, natural, daily intercourse with her hired man for five years, even during her menstruation. She never became pregnant; her menses have always been irregular. At the age of 31 was informed that what she was doing was not right and from that time on she had intercourse less regularly, but she and her cousin persisted in masturbation till five years ago. At present her sexual desire is driving her crazy. She has constant headache, has vertigo and some tinnitus; no diplopia. Her general health is not good; her appetite is poor, bowels are regular, no nocturnal micturition; her digestion is poor.

Physical examination: Pupils equal, normal in size and react normally to light and accommodation; ocular muscles normal, no nystagmus; facial muscles normal, hands normal, patella reflexes normal, no clonus, no spasticity; static ataxia is present; she falls at times.

Operation June 3, 1912. Under ether anesthesia the patient was placed in the prone position with the forehead upon a head-rest extending out from the operating table. I made a semi-circular incision with its base directed upward so as to expose the occipital bone from the external protuberance down to the foramen magnum. The floor of the cerebellar fossa was removed on each side of the median line, exposing both cere-

bellar hemispheres. I next divided the dura and removed a section of the cerebellar cortex $1\frac{1}{2}$ inches long and $\frac{3}{4}$ of an inch wide and involving its entire thickness, *from each hemisphere*. The dura was then sutured and the scalp and neck wound was closed without drainage. The operation recovery was uneventful and the wound healing was perfect.

Post-operative examination made December 31, 1912, by Dr. Hicks. No return of the old sexual symptoms; has been getting much stouter and stronger; mental condition seems good; otherwise all physical symptoms the same as above; ataxia is still present, the same as before operation.

Krause (*Surgery of the Brain*, Vol. I, p. 145), states: "Extirpation of tumors of the cerebellum may be accomplished together with sacrifice of considerable cerebellar tissue. The technique is readily performed even though only one half of the cerebellum is exposed. If carefully executed one third and even one half of a cerebellar hemisphere may be removed without, in my experience, grave consequences. I have not met with important bleeding."

Hollander, in his fascinating work, "The Mental Functions of the Brain," frequently refers to Francis Joseph Gall, the celebrated German neurologist, who lived in the latter part of the eighteenth and the early part of the nineteenth century. Gall was called "the founder of the physiology of the brain," and is lauded and eulogized by Hollander and others for his remarkable discoveries of facts connected with the anatomy and physiology of the central nervous system. It is in the hemispheres of the cerebellum that Gall located the sexual desire. Gall did not assert that every vital function in propagation depends immediately upon the cerebellum, but that the feeling which prompts to the act is organically dependent upon this structure. There are three functions involved in this process—I am quoting from Hollander) sentient, or feeling, reflex, and secernent, or secreting. The first, which involves consciousness, must have an encephalic organ; this, according to Gall, is the cerebellum. The next—the reflex—must take place through the agency of the appropriate segment of the spinal cord (lumbar region). And the last occurs through the sexual organs.

When love for the other sex is absent in men or women whose sexual organs are atrophied, the explanation may be found in the state of those organs; but when this love is ab-

sent in people whose sexual organs and glands are normal and performing their functions faultlessly, one must seek the cause, not in these organs, but in the nervous system. *Lidido sexualis* can be lost, even though the *potentia coeundi* is preserved.

The cerebellum, both in man and in animals, is relatively very small at the time of birth, and it reaches its full size only in the adult. In an infant the mastoid processes approach toward each other, and there is no occipital swelling. Later the occipital fossae become deeper and more convex, widening the distance between the two mastoid processes. Before puberty the distance between them is less than the distance between the two parietal eminences; in the adult the two distances are very nearly the same.

Apollonius of Rhodes, speaking of the passionate love of Media, says: "The fire which devours her attacks all her nerves, and makes itself felt behind the head in that spot where pain is most poignant when an extreme fervour seizes all the senses." In olden times artists depicted broad necks for sensual people.

Gall, of course, had many opportunities to see cases of satyriasis and nymphomania. He criticised the physicans of his own time who sought to locate the morbid manifestations of this instinct exclusively in the sexual organs and who castrated such persons. He argued that this condition is due to a brain lesion, and is not of a local character.

Hollander states that his book on "The Mental Functions of the Brain" "is not a textbook on phrenology." He says "it is one thing to read an average head, which implies merely average characteristics which may fit anybody, for the amusement of the individual and the pecuniary profit of the manipulator, the professional phrenologist; but it is quite a different matter to search out the causes wherefore some particular person proves a failure in life, or has developed tendencies that may ultimately land him in prison or in an asylum." This author ventures, after fifteen years of accumulated experience and research, to formulate, as highly probable, the following functions for the several lobes of the brain:

1. That the prefrontal lobes are concerned in the purely *intellectual* operations.
2. That the *temporo-sphenoidal* lobes are in some way connected with the *propensities* common to man and the lower animals.

3. That the *parietal* lobes and the *posterior part* of the *frontal* lobes are involved in the manifestations of definite *emotions*.

4. That the *occipital* lobes bear a relation to the domestic and social affections.

Hollander has attempted to localize some of the mental faculties, demonstrable from their morbid manifestations to be connected with definite lesions in the brain, as:

1. *Morbid Fear* and *Melancholia* with the *supramarginal* and *angular* gyri of the parietal lobes.

2 and 3. *Kleptomania* and *Voracious Hunger and Abnormal Thirst* with the *anterior part of the temporal* lobes, superior and inferior respectively.

4. *Irascibility* and *Violent Mania* with the *central part of the temporal* lobes.

5. *Mania and Suspicion and Persecution* with the *posterior part of the temporal* lobes.

6. The tender domestic and social *affections* with the *occipital lobes*.

7 and 8. *Perception of Tone* (Music) and of *Number*, with some part of the brain abutting on the *fissure of Sylvius*.

9. *Perception of "Form," "Size," "Place," "Color," Memory of "Time," "Facts and Events,"* etc., with the *supra-orbital* gyri and adjoining parts of the *frontal* convolutions.

10. *Imagination*, and co-ordinated processes, with the *anterior superior part of the frontal* lobes.

11. *Religious Mania* and perversion of *altruistic sentiments* with the *postero-superior part of the frontal* lobes.

12. *Satyriasis and Nymphomania* with the *hemispheres of the cerebellum*.

Hollander's observations "should enable the physician or surgeon, when he meets with cases in which the chief, or perhaps the only symptoms are psychical, and not physical, to localize the seat of the disease and to apply treatment accordingly."

It is with Hollander's rules and advice to guide me that I have ventured into this special field of cranial surgery. I offer no apology for the paucity of my cases or for the comparatively short time since their surgical treatment.

This is an exclusive and exceptional work, and on this account and also because of its altruistic features, it is most fascinating.

EDITORIAL

THE MANAGEMENT OF DISEASE IN THE AGED.

A LARGE proportion of the practice of a general medical man is made up of patients over sixty-five or seventy years of age. Many physicians are inclined to look upon the infirmities of the aged as being beyond therapeutic help and accordingly do not give their ailments the serious and careful attention that they deserve. We would emphasize the fact that there is no class of patients who are more appreciative of considerate attention or more willing to carry out the directions of the physician than those whose long experience has impressed upon them the value and the necessity of rational care and of close adherence to hygienic laws.

We shall not, in this editorial, attempt to deal with the medical treatment of the aged, as it is clearly evident that almost any medicinal agent may be indicated in some of the various diseases encountered in this class of patients. Our chief object will be to offer some suggestions relating to the hygienic care and general care of such cases.

If we were asked to state what we consider the most important factors to be considered in the care of the aged, we would say properly regulated rest and exercise, and a correct diet. These matters are of such far reaching importance that all other measures are comparatively insignificant as compared to them.

A large percentage of aged people need a great deal of rest. This is particularly true of those suffering from cardiac diseases, chronic diseases of the kidney, arteriosclerosis and many diseases of the nervous system. There are few instances in which aged patients are not greatly benefited by rest in a recumbent position for an hour or more after the mid-day meal. Sleep should be encouraged as far as possible, as much of the loss of weight, commonly found in senile patients suffering with arteriosclerosis and associated conditions, is the result of loss of sleep. Whether the patient is able to sleep or not, however, he should retire early and should avoid undue excite-

ment in the evening as it is likely to be productive of insomnia.

In emphasizing the value of rest, however, we must not lose sight of the importance of moderate exercise and fresh air. Indolent habits should be discouraged and, wherever possible, these patients should be advised to take daily walks, the length of which must depend upon the strength and habits of the patient. If the feet are well protected and the patient is warmly clothed, these walks should be kept up even in the winter season, provided the weather is not of extreme severity. The proper use of breathing exercises in suitable cases is also a measure of considerable value.

The question of diet is one about which there has been a great deal of controversy and much that is exaggerated and nonsensical has been written in regard to it.

There are, however, certain fundamental facts upon which most clinicians are agreed, namely, that the senile do best on a diet that is moderate in amount, consisting chiefly of milk, cereals, soft vegetables, eggs, butter, and fruits. Where the teeth are seriously diseased and mastication impaired, the hard foods must be avoided. There is probably no more serious mistake than for an aged person who is unable to masticate properly to gulp down promiscuously, coarse, solid foods which the stomach is absolutely unable to digest. The drinking of water in reasonable amounts should be encouraged, and it is probable that some of the forms of sour milk made with cultures of the lactic acid bacillus are of value from a food standpoint and also assist in preventing intestinal fermentation.

As to the use of small amounts of alcohol in the aged, we can see no objection to this if the patient has been accustomed to its use. Where alcohol has not been habitually used by the patient we believe that a cup of hot milk or hot cocoa is quite as useful and free from some of the objections that apply to alcoholic beverages.

There are certain homœopathic remedies that are of value in retarding sclerotic and degenerative changes, and the occasional administration of such remedies in conjunction with the hygienic measures previously referred to, will contribute much to the comfort of old age and to the longevity of the average patient's life.

G. H. W.

STATE INSPECTION OF DOCTORS' OFFICES.

AN amendment to the Sanitary Code of the State of Louisiana provides for the inspection of doctors' offices and a scoring-card system similar to that used in the inspection of dairies and tenements.

The inspector is required to note and to grade such points as the following: "Personal Appearance of Attendant," "General Neatness," "Sanitary Condition," "Freedom from Bad Odor," "Personal Appearance and Breath of Person in Charge," etc. When the total number of points falls below fifty the doctor is liable to be fined for infraction of the law.

There are probably but few physicians who will approve of this meddlesome interference on the part of the State with matters which it would seem the average physician of sound mind should be perfectly capable of regulating himself. If his own instincts for clean and sanitary surroundings were not sufficiently strong to impel him to look after such matters, it would seem that ordinary business sagacity would be sufficient to urge upon him the importance of making his person and his premises attractive to his patients.

It is hardly conceivable that such a legislative enactment will be productive of any essential good and it is of interest chiefly as an example of the extreme to which paternalism on the part of legislators and Boards of Health is likely to go.

G. H. W.

THE FUTURE OF THE PHYSICIAN.

It is a generally recognized fact that the practice of medicine has radically changed during the past twenty-five years. The physical conditions surrounding our patients have changed, and the mental attitude of our patients toward the physician has changed.

The rapid steps that have been made in the control of infectious diseases and in the enforcement of sanitary laws and regulations, have largely wiped out of existence many of the important contagious diseases that were at one time a source of considerable income to medical practitioners. There is every reason to believe that the development of such laws and regulations will continue and that many diseases, especially those of venereal origin, not now under the control of the

Boards of Health, will soon become so, with the effect of further curtailing a class of disorders that are the cause of widespread distress and suffering. Physicians, let it be said to their credit, have been first and foremost in carrying on this work, which must, of necessity, more and more diminish their sources of income.

It is curious to note change in the mental attitude of patients toward physicians. The intelligent layman of to-day, not only comes to us for the relief of his symptoms when sick, but also for information and advice as to the prevention of sickness and ill health. In other words, the laity are beginning to realize that the doctor who can keep them well is quite as valuable as the one who can restore them to health after the onset of sickness.

The impression is more and more forced upon us that the outlook for the physician along these lines is both inspiring and encouraging and the man who will fit himself for this work will not be compelled to lament over the "good old times" when diphtheria and typhoid fever kept him busy all winter.

How many persons among your clientele are always ailing, because of poor nutrition, "nervousness," or some minor or chronic ailment to which little or no attention has been paid? Get interested in these patients. Give them proper advice in regard to diet, exercise, rest, ventilation and mental hygiene, and you will be surprised to learn how willing and how anxious they are to follow your advice and to pay you for your trouble. Instil into the minds of your patients the advantages of careful examinations from time to time, even when in health, and the importance of taking care of minor ailments before they develop into serious diseases. This is a field in which you will have few competitors and one which will yield large results both in professional satisfaction and in well earned income to those physicians who will prepare themselves for this important work. The age when human beings will be prepared to dispense with the service of the conscientious physician is yet a long way off. As long as man is morally and physically constituted as he is to-day, the work of the doctor must continue and it is our belief that his work will become broader, more constructive and more important as years go on.

G. H. W.

GLEANINGS

TWO YEARS' EXPERIENCE WITH SALVARSAN.—Malcolm Morris and Henry MacCormac (*The London Lancet*) have published the results of their experience with salvarsan at the Seaman's Hospital, Greenwich, London, and have also given a synopsis of the voluminous literature to date. They had no fatalities, but have collected from the literature the histories of 21 deaths following one injection, and eighteen following two or more doses. There are ugly rumors that the large number of deaths from it in Paris have caused some of the syphilographers at the Saint Louis Hospital to forbid its use, but Morris merely mentions hearing of some cases which died during the injection. The deaths are about equally divided between intravenous and intramuscular. Many developed coma, jaundice, cyanosis and convulsions. There seemed to be anaphylactic phenomena in these as well as other non-fatal cases—a supersensitiveness of tissues to arsenic. This is curious, as the spirochetæ may develop a resistance to arsenic. Ehrlich has demonstrated that all trypanosomes are capable of developing such resistance. Deaths are largely in those having paresis, tabes or other forms of involvement of the nervous system or diseases of the heart and arteries.

In all our primary cases the disease has been immediately arrested, and in none which we have been able to follow up have secondary symptoms developed, with the exception of sore throat. In secondary and tertiary cases the skin lesions, without a single exception, have rapidly disappeared.

In secondary cases there has been rapid disappearance not only of cutaneous but also of mucous membrane lesions. The rash has quickly faded, but some pigmentation has usually persisted for a considerable time. The general condition also has greatly benefited, the appetite improving, and the patients putting on weight and gaining color.

The effect of salvarsan in reducing the temperature in secondary cases is remarkable. When syphilitics are being treated as out-patients, the fact that they are suffering from slight fever is apt to be overlooked. Sometimes the fever is more than slight.

In tertiary cases, even in cases that had proved obdurate to mercury and iodide of potassium vigorously and perseveringly administered, we have not had a single failure where the integumentary system was attacked. Almost as much may be said of lesions of the tongue. Here, however, we have two disappointments to record. In one case the patient, a male between 45 and 50, who had received one injection of salvarsan, returned a week later for a second injection, when it was found that in the interval an active carcinoma had developed and that submental glands had become the seat of metastases. In the other case, that of a man of 50 with severe lesions of the tongue, there was also nephritis, so that the

dose of salvarsan was limited to 0.2 grm. Even this was borne so badly that no more salvarsan was given. The patient succumbed to carcinoma six months later.

As between the two preparations, our results incline us to give the preference to the earlier one. Neosalvarsan is not only less stable than salvarsan, so that unless it be used at once its toxicity may be intensified to the danger point, but we have found it to be less rapid in its effects, lesions disappearing less readily under its influence, and the Wassermann reaction remaining positive longer.

Importance of Early Treatment. Desirable as it is to secure the rapid disappearance of the secondary or tertiary phenomena, it is of still greater moment to abort syphilis in the first stage, so that it may never develop into a constitutional disease, or to arrest it at the very beginning of the secondary stage. Now that the presence of the spirocheta can be demonstrated with comparative ease in the primary sore it is no longer necessary to wait even for induration. Neisser's experiments with apes show that the virus has found its way to the internal organs within 16 days of infection, that is even before the appearance of the primary sore, and the generalization of the disease appears to be complete, as a rule, by the time the chancre appears. The obvious inference is that whenever a suspicious sore comes under notice it should be examined for spirochetæ without delay, and that whenever a possibly syphilitic rash is observed the Wassermann test should be applied. If in either case the result is positive and no contraindications are present, an intravenous injection of salvarsan should be given, while in the former case the sore should, if possible, be excised or destroyed with cautery. A mercurial course should at the same time, in our opinion, be begun. After a few days a second dose of salvarsan should be given, and if after another short interval the Wassermann reaction has not become negative, a third. In all cases the course of mercury should continue, with intermissions, for two years. In cases treated thus, the vast majority of the spirochetæ will as a rule be destroyed by the salvarsan, and the remainder disposed of by the mercury.

Is Salvarsan a Cure?—In connection with a disease in which there may be recrudescence years after the disappearance of all symptoms, and in which the Wassermann reaction may return to the positive although there are no further clinical phenomena, the term 'cure' must obviously be used with great caution. The most that we are able to say from our own experience is that in two of our cases treated with salvarsan alone the Wassermann reaction has remained negative after the lapse of a year. At the present time the only conclusive evidence of cure is reinfection, of which we have had no instance. Cases of reinfection have, however, been recorded by, among others, Colonel T. W. Gibbard, R. A. M. C., who last year reported five such cases in the Rochester Row series. In each instance the sore was on a fresh site and occurred within the incubation period from the date of exposure to infection, and though it is possible that the lesions were chancriform gummata, this is rendered very improbable by the large number of spirochetæ present in each lesion. But although salvarsan may in some cases abort the disease in the primary stage, and may effect a permanent cure in later stages, these results cannot be confidently counted upon, and prudence dictates that in every

case this remedy should be supplemented by a course of mercury. On the other hand, that salvarsan has a more rapid and powerful effect upon the spirochete than mercury seems to us indisputable. In some of our cases malignant and less severe types of syphilis that had proved absolutely resistant to mercury, or to mercury *plus* potassium iodide, have promptly yielded to salvarsan. With mercury alone, however administered, lesions are much more persistent, and in nearly all cases the Wassermann reaction remains positive during the first year and in about a third of the cases for over two years. The superior virtue of salvarsan is therefore demonstrable, and in every case in which it is not contraindicated it ought, in our opinion, to be administered as soon as the diagnosis is established.

It is quite evident now that though Ehrlich has made a great discovery, he is still far from having produced a safe remedy which will cure in one dose as was so confidently claimed at first.

TREATMENT OF INTESTINAL TOXEMIA.—McIlroy (Glasgow Medical Journal) says that the first essential in taking up the treatment is to have the mouth put in a healthy condition, the teeth being gone over by a dentist and the gums disinfected with tincture of iodine or by ionic medication. As for the diet, dry meals are often of benefit, copious draughts of water being taken, however, between meals and in the early morning. A plentiful supply of fat in the form of butter is of value. Green vegetables are difficult of digestion. In some cases of marked toxemia, even of the chronic variety, it is necessary to put the patient on a milk diet for several weeks. In severe forms, too, it should be borne in mind that small and frequent meals are preferable to large meals at long intervals.

Exercises to strengthen the abdominal muscles are of great value, e. g., lying flat on the floor and raising the trunk to a sitting posture without the aid of the arms; lying flat and raising the legs perpendicularly; standing straight with the feet close together and bending forward until the fingers nearly or quite touch the ground. These exercises are best performed after the morning bath, and each should be repeated about a dozen times. Abdominal belts or binders are of benefit in many cases, their object being to prevent the downward pressure of the viscera and lend support to the abdominal walls. In women of the hospital class, the author advises a broad binder of new flannel, carefully applied with safety pins while the patient is recumbent.

In regard to medicinal treatment, he lays stress upon the avoidance of frequent doses of purgatives in chronic cases, though occasionally calomel and other drugs have to be given for diagnostic and surgical purposes, as well as in acute conditions. In cases of obstinate intestinal stasis, he has had excellent results from the following procedure; on rising in the morning the patient takes a tablespoonful of pure liquid paraffin, about half an hour or more before breakfast. This acts as an intestinal lubricant, and prevents septic absorption. After breakfast the patient must go daily to stool whether defecation takes place or not, and in time will find that a regular bowel movement results. Sometimes an additional dose of the liquid paraffin is given at bedtime, if required.

Natural mineral waters may be given, and in cases of fecal accumulation, a small enema of olive oil at bedtime is of benefit. The author

has at times employed pituitary extract for chronic constipation, and has found it of value, whether given hypodermically or by mouth.

Where an obvious lesion is present, or where all other measures have been tried without success, due consideration should be given to the benefit to be gained by short circuiting operations between the small and large intestine, or even the removal of part of the latter.—*Charlotte Medical Journal*.

TREATMENT OF EXOPHTHALMIC GOITER BY X-RAYS.—Ironsides Bruce presents an analysis of eighteen cases of exophthalmic goiter which had been treated at Charing Cross Hospital since 1905. Six of the eighteen did not appear for re-examination, and one had died, in which case only three exposures had been given when diphtheria supervened. The remaining twelve were examined three months ago, and they had been divided into three categories: (1) cured; (2) greatly improved; (3) improved. Four were cured; the exophthalmos and goiter had gone, and no symptoms remained. Five—of which one had improved, and one of these also had been operated upon, two still remaining under treatment. The exophthalmos disappeared in four cases, was slight in three, and marked in five, two being still under treatment. The skin was normal in seven cases, and there was slight telangiectasis in four, and marked telangiectasis in one. These latter were the author's earliest cases, and the number of exposures given was much greater than had been since found to suffice. All the patients expressed themselves as much better, and they stated that their weight had increased. In none of the patients was there any sign of myxedema; and that was of interest, since in a case the author recorded some years ago, in which he thought myxedema had developed, the patient got very fat at the latter end of the treatment, which lasted two years, and the hair over her forehead began to fall. Three months ago her appearance was normal, no sign of myxedema being noted. All the author's cases were treated with the X-ray tube at a distance of 18 to 12 inches from the skin, the surrounding part being screened off by a 4-inch thickness of felt. They had attended either two or three times a week for periods varying up to two years. The effect of the treatment was wonderfully good. But the author had always tried to have in mind the fact that cases of exophthalmic goiter had been known to recover without any treatment whatever, so that one must somewhat discount the value of the X-ray treatment on that account.—*Proceedings of the Royal Society of Medicine*.—*Charlotte Medical Journal*.

THE DIAGNOSIS OF GASTRIC ULCER.—The history and symptoms of gastric ulcer are typical in but few cases, remarks J. R. Verbrycke in *The American Journal of Medical Sciences* (Nov. 1913, p. 742). There is no characteristic sort of pain, although in different individuals the pain usually does appear at a fixed time after meals, and always at the same time in the same patient. This pain is relieved by food, alkalis or vomiting. The vomiting of blood, one of the old cardinal symptoms, does not appear in ten per cent of the patients; and even nausea and vomiting, while many times present, are absent in fully one-half of ulcer-patients.

Two points are of decided value in the consideration of the history:

(1) There is a certain periodicity, that is, after prolonged ill health all the symptoms may be completely relieved for days, weeks or months; (2) when the pain is most severe, all other symptoms from which the patient suffers are likely to be increased. Upon physical examination, a tender point will usually be found at some spot in the epigastrium or at the dorsal vertebrae behind, or in both places. However, this tenderness is often slight, and it may be absent. When present, it always occurs in the same spot.

Of the laboratory tests, Verbrycke attaches more importance to the determination of occult blood than to anything else. Since the bleeding is intermittent, several examinations should be made under varying conditions.

The benzidin reaction is the best of which the writer has knowledge, but blood from hemorrhoids, from the gums and elsewhere along the alimentary canal should be excluded. Also of value is the thread-impregnation test of Einhorn. Hyperacidity is found in a large proportion of the cases, but may be absent. The X-ray examination is of undoubted value.

To summarize, Doctor Verbrycke submits that there are several points which practically assure a diagnosis; namely: tender point, with occult blood; hypersecretion, with tender point; hypersecretion, with occult blood; tender point, with repeated positive thread tests; tender point, with hematemesis; hematemesis, with hypersecretion; hypersecretion, with positive thread tests.—*Am. Jour. of Clinical Medicine.*

NEEDED FINANCIAL BASIS FOR THE MEDICAL PROFESSION.—According to statistics, there are now practicing in the United States and Canada, about 150,000 physicians. In that territory there are between 3,000,000 and 4,000,000 people constantly ill, and unnumbered millions on the border-line of illness. Eugene Lyman Fisk, Medical Director, Postal Life Insurance Company, thinks that over-crowded as the profession is supposed to be, it is questionable whether the supply of competent physicians would exceed the demand if these sick people turned for relief to the men trained to do the work, instead of relying on almanacs, cook-books, soothsayers, or any other mysterious medium of relief, except the doctor, until they finally appear at his door demanding that he instantly restore their diseased tissues and organs to normal condition. Assuming that preventive medicine continues to reduce this morbidity, the balancing factors derived from closer contact with the public may result in improving the economic condition of the physician. The average physician goes about his work unmindful of these remote possibilities, happy if he can in any way lessen the suffering in his community. It is, however, the physician's duty to take thought of all proper ways by which his profession may be placed upon a financial footing that will enable it to render the most efficient public service. Is it not important that the scientific men to whom are committed the health and lives of families be placed upon an economic basis at least equal to that of a skilled mechanic? An underpaid and oftentimes never paid "last resort" medical profession is not in line with public welfare. There should be, however, no yielding to the commercial spirit of the age.—*Lancet-Clinic.*

PHARMACOLOGICAL OBSERVATIONS ON MAN.—In a report in *Archives of Internal Medicine*, Marvin says that he is inclined to believe that the difference in opinion which has existed between pharmacologists and clinicians regarding the effects of important drugs lies in the fact that the former bases his views upon the results obtained from the lower animals in health, while the clinician reaches his conclusions from the effects of the drugs upon the human being in disease. No more valuable illustration of this difference of opinion as to result can be cited than the effect of alcohol, which not only differs in its action in the lower animals and man, but differs materially in its action in the healthy man as compared to its effects in the diseased man.

Using students at the University of Vermont as his subjects, Marvin first made observations upon normal respiration, pulse and blood-pressure. After completing these observations, strychnine sulphate was injected hypodermically into the muscular tissue of the upper arm, and records were then made every five minutes on respiration and pulse, and every ten minutes on blood-pressure. Different doses of strychnine were used, varying from 1-20 to 1-40 of a grain, and sufficient time was allowed to elapse between experiments to prevent the doses from being cumulative. He found that doses varying from 1-40 to 1-20 of a grain had no appreciable effect on the rate of respiration, but he apparently failed to make any estimations as to changes in the depth of respiration, which is quite as important as a change in rate. A 1-40 of a grain slowed the pulse-rate per minute five beats and 1-20 eight beats. The maximum effect seemed to be at the end of forty minutes. A 1-40 of a grain produced a rise of blood-pressure equivalent to three millimeters of mercury, and 1-20 grain equivalent to eight millimeters of mercury. Marvin believes that his results prove positively that strychnine does increase blood-pressure in healthy human beings, the more so as in a similar series of experiments where the drug was placed under the tongue identical results were reached.

Concerning digitalis and using a standardized tincture which had been tested upon guinea-pigs, he found that twenty minims of such a tincture caused an average increase of blood-pressure of thirteen millimeters, which reached its height in five hours, and this effect persisted to some extent until after fifty hours had passed. There was also a slowing in the pulse-rate of eight beats per minute, but there was no change in respiratory rate. These observations are of particular interest not only for the reasons that we have given, but also because a number of recent writers have claimed that the administration of digitalis to man does not cause a rise of blood-pressure as it so constantly does in the lower animals.—*Medical Brief*.

THE DANGER OF UTERINE TAMPONADE.—Weber (Munich) has found that after six or seven hours no uterine tampon is entirely sterile. The germ content regularly increases with the length of time it is allowed to remain in place. Although in some cases a utero-vaginal tampon is unavoidable, yet this procedure is by no means harmless, but on the contrary threatens the danger of infection. In order to lessen the latter it

is urgently required never to permit a tampon to remain longer than six hours, and not to repeat the tampon.—*Zentralbl. f. Gyn.*, 1913—924.

THEODORE J. GRAMM, M.D.

NON-SPECIFIC OPHTHALMIA NEONATORUM.—Crede-Hörder says the diagnosis of specific ophthalmia is too often made when a simple microscopic examination would show that a different process is present. Non specific infection is distinguished from the true gonorrhoeal disease by the cornea not being involved and by the secretion being more serous and not pure pus. Microscopically there are found leucocytes, few epithelial cells and often Gram positive diplococci. In one case genuine Fränkel's pneumococci and numerous plump rods were found. The diplococcus infection begins late, mostly between the sixth and sixteenth day, while in the pneumococcus infection the secretion is a sanguivulent, purulent secretion, the oedema is pronounced, but the cornea is not involved. Irrigation with boric acid solution is useful in all cases.—*Abstr. Zentralbl. f. Gyn.*, 1913—475.

THEODORE J. GRAMM, M.D.

THE EFFECT OF PITUITRIN UPON THE COURSE OF PUERPERAL ECLAMPSIA—In a case of eclampsia in a primipara two Polish physicians used intramuscular injection of .01 pituitrin. The head was situated above the pelvic inlet, the membranes intact and the os dilated to admit one finger. The eclamptic attacks ceased and the pains became more active. The pulse improved and fell from 160 to 76. Spontaneous delivery was effected after 29 hours. Six hours later the patient had a convulsion, and in the following thirteen hours five attacks occurred. Pituitrin was again injected; shortly thereafter the patient had a mild convulsion, but this was the last. On the following day the patient was again rational.

The authors state that although one case does not warrant any conclusions still there is suggested the possibility of a connection between eclampsia and a diminished instead of a normally increased function of the pituitary body in pregnancy and thus pituitrin might be a specific medicament in order to restore the biochemical equilibrium in the organism of the pregnant woman.—*Abstr. Zentralbl. f. Gyn.*, 1913—712.

THEODORE J. GRAMM, M.D.

PALLIATIVE TREATMENT OF INOPERABLE PORTIO CANCER WITH PULVERIZED SUGAR.—Berczeller (Buda-Pest) has found in pulverized sugar an unusually cleanly, convenient and simple, and at the same time, very effective means of treating these cases. The foul odor and the discharge rapidly disappear; the hemorrhage becomes less; the appearance and general condition of the patient improve visibly, so that one almost thinks of a cure, especially after the new growth becomes more dry, the portio smaller and therefore more normal in appearance.

The treatment is quite simple: a speculum is introduced and the cervix is dried; then the speculum is half filled with pulverized sugar; by means of a piece of iodoform gauze the sugar is pushed into the cervix and held there. The treatment is repeated daily or may be used from one to three times per week. The result is surprising. Even after the first treatment the gauze comes away clean. The treatment may also be recommended as preparatory for operation.—*Zentralbl. f. Gyn.*, 1913—852.

THEODORE J. GRAMM, M.D.

Monthly Retrospect

OF HOMŒOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

REPTILIAN VENOMS.—In considering the utility of any curative agent nowadays, less and less thought is paid to its character, be the same pleasing or palpably otherwise. This is quite the proper and reasonable attitude the profession should assume and is in point of fact the only tenable attitude. In the homœopathic practice the most singular as well as the most fascinating of all its variously correlated medicaments are the venoms gotten from the fangs of poisonous snakes. Of this group, lachesis is most widely known and used by the profession at large. Its poisonous congeners, however, are often of approved value and their respective pathogeneses and indications should in nowise be airily shunned. Of these related bodies the *vipera torva*, the *crotalus horridus* and the *elaps corallinus* will be considered as their clinical indications have been written about in recent homœopathic literature.

The first three venoms mentioned have formed the basis of a paper by Dr. Marvin Z. Westervelt which was read before the Connecticut Homœopathic Medical Society fairly recently. Considering them *ad seriatum* lachesis claims first attention. Lachesis or *trigonocephalus* inhabits the hot countries of South America. The common native name for this reptile is *churukuku*. The snake attains a length of upwards of seven feet and its poisonous fangs are nearly one inch in length. The skin is of a reddish brown color, marked along the back with large rhomboidal spots of a blackish-brown hue, each of which encloses two spots of the color of the body. The poison resembles saliva, only it is less viscous, but limpid, inodorous, and without any marked taste, the color being somewhat greenish; at the extremity of the fang, it easily forms into drops, and falls without threading; exposed to the air, it soon concentrates into a dry yellow mass, which for a long time, preserves its poisonous qualities. The poison of lachesis has this peculiarity, that it may be swallowed without inconvenience, whilst introduced into a wound, or injected into a vein, it produces the most dreadful symptoms, and generally death. The virus of this serpent has been more carefully proved than that of any other. The specimen used by Dr. Constantine Hering in his experiments was obtained from the living snake, which was stunned with a blow; the poison was then collected on sugar by pressing the poison fang upwards against the bag, and the three first attenuations prepared by trituration. One of the first symptoms brought out in proving this particular venom is a sense of constriction about the throat. This is certainly a keynote symptom in the best sense and based upon it

and other suggestive symptoms Dr. Westervelt reported an excellent cure in a woman who had developed abnormal mental symptoms during the climacteric.

Lachesis is well indicated in cases of chronic sore throat and in dryness of the throat attended with much swelling. The raw or sore state is always marked. After producing throat symptoms in the proving it causes severe pains all over the head, front and back, with an attendant giddiness. The higher dynamizations are quickly curative in cases of delirium tremens, where there is much trembling and confusion of ideas. This remedy given to a female prover every quarter hour for three days produced a frightful constrictive sensation at the larynx, almost suffocating her at night. In an attack, woke the whole family; they poured a quantity of brandy down her throat with but little effect. All thought she was dying from inability to breathe or expand the lungs. CM., in a woman of forty-five, produced rolling from side to side in the bed constantly, from hour to hour. Could not stop her. Remedy induced extreme restlessness and nervousness. CM. has cured repeatedly diphtheritic sore throat and has been of great service in malignant scarlet fever with very offensive breath. In these cases the glands of the neck were swollen and the neck was sore to the touch. Lachesis is a splendid remedy for hoarseness with complete loss of voice.

Another venom of great interest is the *elaps corallinus*, a splendid account of which may be gotten in Mure's *Materia Medica*—a work long since published by one Radde, in 1854. Among the many things of especial interest in this interesting old volume is one directly pertinent to this peculiar viper. Curiously enough Nash mentions *elaps corallinus* only twice and Timothy F. Allen did not regard it of sufficient importance to incorporate it into his *Handbook*. To begin with the elaps is the most brilliant snake in Brazil, at least in so far as coloring goes. It is about two feet and a half long, thick in proportion to its head, and has a sharp tail. Its colors, in ring, are vermillion, black and greenish white. The poison is taken from the living reptile, but not without danger. In this connection Dr. Mure says "as soon as I had determined to institute provings with the poison of the cobra-coral, several of these reptiles were, at my request, brought to me on the same day, so frequent are they in the forests of Sahy."

Dr. Mure obtained from each snake from eight to ten drops of the poison. He dropped the same on sugar of milk. This was at once triturated, and very effectively too, to judge from his description as 6,000 turns were taken for the first and 3,000 more for each additional decimal. Of the symptoms in general Dr. Mure has this to say: "The symptoms which I have collected are not a great many but they can be depended upon. Most of the symptoms were experienced by several provers, and some of them have already been confirmed by treatment, among which may be mentioned the oppression in going upstairs, the vesicular eruption on the feet and deafness. This last symptom is of great importance on account of its being so obstinate. For pulmonary affections the poison of the cobra may likewise prove a valuable remedy, especially for the second stage of phthisis, characterized by bloody cough and derangement of the digestive function." Later Dr. Mure adds: "The special

action which this poison seems to exercise on the right side, the paralysis, the lancinations, have appeared to me worthy of attention. The gyratory motions, the desire to move to and fro, the scaling off of the epidermis and several symptoms relating to the disposition and the mind seem to deserve the attention of the philosophical physician." Such are some of the more striking of Dr. Mure's comments. They are the more salient features of the drug's morbid action on the healthy human. Now all of this is but a touching on the surface, but a brief summary of the reliable symptoms are the following for elaps: "*Constant deafness*. (2) Acidity after every mouthful of food. (3) Spitting of black coagula of blood. (4) Almost constant cough. (5) A chronic loss of breath when going upstairs, disappears after second day of proving. (6) Violent fit of dry cough which finally ends in raising black blood, with frightful tearing pains in every part of the lungs, especially in the right side, at upper part of chest. (7) A black blood spurts out of the finger when pricking it ever so little. (8) Vesicular eruption on the feet.

In the first proving there is mention of a feeling as if paralyzed in the right arm, whiel in the second proving we read, fourth day: "Complete paralysis of the right side, with inability to rise in the morning." Also in this second proving we have: "Discharge of black liquid blood from the bowels." Quite recently Dr. William B. Griggs has had some good results with this remedy in his service at the Children's Homœopathic Hospital. So much for elaps and for lachesis. And now a case in which the *vipera torva*, the venom of the German viper, was used and reported from case records of Dr. Westervelt. Unfortunately only short provings of this virus have been made and these may be seen in Jahr's Symptom Codex. The first case is that of Frederick B., aged 13 years. On the eve of July 4th, while holding a blank cartridge pistol in his right hand, the end of the barrel resting in the palm of the left hand, he unconsciously pulled the trigger, receiving the full charge in the palm of the left hand. Upon the first visit Dr. Westervelt found that as much as possible of the wound had cleaned off the offending powder and wadding by a medical man who had hurriedly been called in and the hand had been kept continuously moist with a corrosive sublimate solution. On the doctor's first visit the patient appeared to be doing nicely; no temperature; pulse normal; no pain; appetite good and had slept well all night.

The sublimate treatment was continued by Dr. Westervelt. On the following day, however, the hand began to swell and there was a slight rise in temperature. At this time more of the powder grains were dissected out. The bichloride treatment was continued locally and echinacea was administered internally. On the next day the hand had swollen to an alarming extent, the process having extended well up the arm. Temperature at this time was 103.3 and there was intense headache and a constant restlessness attended with nausea and some vomiting. Dr. Westervelt then telephoned to the druggist for anti-tetanic serum, but as it usually took from two to four days to get an order delivered there in Litchfield Hills he decided to use the indicated remedy for this case which was *vipera torva*. Under this remedy we find this symptom "sensation on letting the limb hang down as if it would burst." *Vipera torva* 30th was

administered every three hours that day, every four hours next day, and three times a day for the next three days.

From the day the boy first received the *vipera* there was a marked reduction in the swelling in the hand and arm; the pain ceased, as did also the headache, nausea and vomiting. The temperature went down the first day, rose again slightly the next day, but went down again to normal before that day was past, and at no time after that was an increase registered. Four weeks after the accident, the boy came to my office and said: "Doctor, there is something cropping out of that old sore." The "said" sore had entirely healed, but as there seemed to be something beneath the surface of the skin, a slight incision was made and a half section of the cartridge wadding was removed. All this time, with this foreign matter in the flesh of the hand, and while gradually working its way to the surface, there had been absolutely no pain or swelling. In fact, the patient was unconscious of its presence until the slight swelling was noticed beneath the skin. At the same time this matter was removed the patient was given three doses of *vipera* to be taken every other day, and from that time to the present there has not been the least pain, swelling or untoward symptom of any character. (It was most remiss of the druggist in not having fresh anti-tetanic serum which would have acted as a prophylactic.)

And now, finally, just one case in which *crotalus horridus*, or the rattlesnake venom was used. Mr. B., age 81 years. A veteran of the Rebellion. Whilst in the army he suffered from an attack of bilious fever, remittent in type; since which time he has had trouble generally every spring. A recent attack set in with a prolonged chill, followed by a rapid rise in temperature. During the fever there was nausea and vomiting; the vomited matter, at times, being a greenish-black fluid. The odor from the mouth was intensely fetid; the tongue was greatly swollen; the gums bled on the slightest touch; the saliva was frothy and bloody, the latter symptom being due, no doubt to the bleeding of the gums. The region of the stomach was very sensitive. He could retain no food or drink, especially if lying on the right side, but as improvement set in could take food when lying on the left side or back at an earlier period than if on the right side. The stools were almost black and extremely offensive.

There was an intense jaundiced appearance, and yet underneath the skin could be seen at various points, hemorrhagic spots. The urine was bloody, albuminous and scanty. The lower extremities were edematous, with several large hemorrhagic spots on the feet and legs. There was a constant trembling of the hands. At all times the patient has a marked dementia, but during this sickness this condition was greatly aggravated. The memory was almost a blank and at times there was a mild delirium. He was fearful and weeping or talking constantly. When the case was first seen *eupatorium perfoliatum* was prescribed. This, however, to *veratrum album* afterwards because of the rapid sinking of strength, coldness of face and extremities, and the watery stool condition which began almost as soon as the temperature began to rise. On the third day the hemorrhagic symptoms began to appear, together with other symptoms that pointed to lachesis, so that this remedy was administered. This seemed to hold the case for a time, the fever having moderated some-

what, the patient becoming more quiet and the stools decreasing in number. On the fifth day, however, the vomiting began and all the other symptoms became aggravated. There was not so much change in the symptoms in so far as new symptoms were concerned, but those symptoms that were present, while still pointing to lachesis, seemed to be even of a more severe form, or in other words, they seemed to require something a little stronger than lachesis, if we might express it in that way. And so, believing *crotalus* to be of a more virulent nature than lachesis, it was given and in the 12th dynamization. Within six hours a change for the better was noted, and from that time the patient continued to improve until he was finally restored to a condition of health as good, and in many respects, better than before the attack. He is still receiving one dose of *crotalus* 30th each week, because of the effect it apparently has on his mental condition.

HOMOEOPATHIC REMEDIES FOR GALL-STONES. Dr. T. Miller Neatby, in a very exhaustive article on Gall-Stones in the *British Homœopathic Journal*, gives the following suggestions as to remedies for gall-stones:

The drugs most commonly employed by us are *berberis*, *chelidonium*, *calcareæ carbonica*, *china*, *lycopodium*, *nux vomica*, *hydrastis*, *hepar sulph.*, *sulphur*, and *podophyllum*. These are all such familiar and well-known remedies that I should prove tedious to the last degree if I entered into their several and various indications. But they are all exceedingly useful and they are not tools of which the homœopathic workman has any cause to be ashamed. I think I have found *china*, *lycopodium* and *calcareæ* perhaps the most serviceable for hard everyday wear. Owing to the want of individual peculiarities it is often difficult to decide upon the drug. Hepatic pain, jaundice, light-colored stools, do not carry us very far. Where chilliness and cold extremities are very marked symptoms, I lean to *calcareæ*. If there is in addition a great sensitiveness to light touch and indeed to all impressions, I think of *hepar*. A case recently in the hospital under Dr. Goldsbrough did very well, and the gall-bladder which was very large was reduced so as to be hardly palpable, under *hepar sulph.* and *sulphur*. If I notice a sensitiveness to light touch with relief on deep pressure and an abnormal flatulence, I think of *china*. If pain under the right scapula is a very prominent symptom, I think, of course, of *chelidonium*. In some rare cases of cholelithiasis the "dyspeptic" pain complained of is relieved by food. These are the cases that are confounded with duodenal ulcer, and this symptom is an additional reason for giving *chelidonium*. Where there are "urinary" symptoms intermingled (as in the case already mentioned, now in the wards) *berberis* would, I think, suggest itself for an acute attack, *lycopodium* for the chronic attack, *lycopodium*, with its right-sidedness, its hepatic sensitiveness, its eructations and great flatulence, its constricted feeling soon after food, its "liverish" quality of mind, together with the profound nature of its action, all suggest it as a remedy likely to serve us well. Most gall-stone patients are women, but where we have a man who has lived over-freely as well as over-sedentarily and has perhaps taken many "liver pills," we may well think of *nux vomica*. . When gastro-duodenal catarrh, one of the great

predisponents of gall-stones, is much in evidence, as well as the general symptoms included in the expression "torpid liver," we shall think of *hydrastis*, and also of *podophyllum*. *Podophyllum*, like *chelidonium*, though in less measure, has a pain under the right scapula; it affects chiefly the duodenum, the liver and the rectum.

To two other drugs I will now make a special reference. They are *china* and *carduus marianus*. It is nearly sixty years since Thayer discovered the efficacy of *china* as a remedy for periodical colic from biliary calculi or other causes. For a period of twenty years he never failed, so he said, to cure, permanently and radically, every patient with gall-stone colic who took the remedy according to his directions, and he came to the conclusion that *china* was specific to the condition. It is evident that he did not consider *china* specific merely to the attacks of colic, because he speaks of his method as one that "never fails to correct the tendency to the formation" of gall-stones. His method is explained in the following extract from the *New England Medical Gazette*, October, 1875: "I gave her the usual 2 dram vial of pellets of *china* 6, with my stereotyped directions to take six pills twice a day till ten doses are taken; then six pills once a day till ten doses are taken; then six pills every other day till ten doses are taken; then six pills every third day till ten doses are taken, and so on till at length the dose is taken only once a month." And this is the system that had never failed for twenty years. One holds up one's hands and exclaims, like the devout Mohammedan, "Allah is great!" I have calculated that by the time the patient is taking a single dose in the month nearly thirteen years have elapsed. If Dr. Thayer was able to keep his patients under continuous treatment for the same complaint for thirteen years, he was either cleverer or more fortunate than most of us on this side of the water. I have heard it said that the late Dr. Burnett used to stipulate for three years in order to cure a chronic case, a stipulation that I always thought rather wily; but, to use a piece of slang, Thayer fairly "knocks spots off him." I have certainly found *china* useful, but I have my doubts as to its specificity.

The other drug I wish to refer to is *carduus marianus* (St. Mary's thistle). The liver appears to be its chief sphere of action. It has consequently been used for portal hyperæmia, biliary catarrh and biliary lithiasis, as well as for varicose veins and varicose ulcers that appear to be dependent on portal stasis. It has hepatic pain, radiating to the chest, shoulders, back and loins, nausea and bilious vomiting, as well as jaundice and constipation, amongst its symptoms. The pain is said to be aggravated by lying on the left side; this is a symptom that I remember noting in a gall-stone patient, and that I attributed to the dragging that that posture caused upon a very bulky gall-bladder. *Carduus* is also supposed to be applicable to those who suffer from the abuse of alcohol. I have never myself tried *carduus* for cholelithiasis.

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VACCINES IN TYPHOID FEVER.* †

BY

S. W. SAPPINGTON, M. D., PHILADELPHIA.

DURING the spring and summer of 1913, an increase in the incidence of typhoid fever gave quite a number of patients to the wards of Hahnemann Hospital and afforded the writer an opportunity of using vaccines on the cases in his service. The methods of procedure and the results obtained furnish the material for this paper.

Each patient entered as or suspected of typhoid fever was at once subjected to a leucocyte count, blood culture and Widal test. In twelve cases thus admitted the leucocyte count averaged 4,890 cells; the highest count was 7,200, and the lowest 3,300. Blood cultures were positive in eleven of the twelve patients. Ten of the culture growths were of pure typhoid; one was a paratyphoid A. Nine of the eleven typhoids gave positive cultures on the first examination. The Widal reaction was present in seven of the eleven cases on the first examination. In two cases, the blood culture was positive before the Widal was present. Agglutination was obtained in the second test of these patients. In a third case, both the blood culture and the Widal were negative on the first and positive on the second test. Blood cultures and Widal's, then, were positive in all the eleven cases, save one. This case was negative in culture and agglutination on the first test, but was so obviously a very severe typhoid that further tests were overlooked.

These eleven cases of typhoid fever were treated with vac-

*From the Hering Research Laboratory.

†Read before the Clinico-Pathologic Society of Philadelphia, Dec. 20, 1913.

cines. In addition, they were given a liberal diet, after the method of Coleman.¹ From the first and during the course of the disease, the patients were allowed bread and butter, toast, crackers, cereals, ice cream, soft boiled, poached and raw eggs, blanc mange, gelatine, rice, potato and apple sauce. Sugar of milk was used freely for sweetening. Six of the patients received no drug. One received bryonia for one day; two were given baptisia for a few days; one hyoscyamus; and one both baptisia and hyoscyamus. Stimulants were not used. Otherwise the treatment was along routine lines.

From the first case treated, an autogenous vaccine was prepared, and this and all the subsequent cases were treated with the same vaccine. From previous and present experience we have not found any advantage in using an autogenous vaccine in the treatment of typhoid fever, though in the present series we were in a position to use such emulsions in ten of our eleven cases. Far more important is a strain of typhoid which will induce marked immune reactions, and happily in this culture of our first case we seem to have hit upon the right one. The suspensions were killed by heat at 55 C. and put up in .5 per cent. carbolic salt solution. We intend in the future to try suspensions killed by this carbolic salt solution without the aid of heat, as advised by Semple and Matson² and Meakins and Foster.³ Unfortunately, there was some mistake in the estimation of the bacterial content of our vaccines, but, while not absolutely sure of the dosage, we are very close to an accurate statement when we say our dosage varied from 100 to 500 million, with an occasional dose of a 1,000 million bacteria. Two doses were usually given on successive days and subsequent ones at intervals of from two to five days or longer, as seemed necessary. Four cases received three doses; three cases received four doses; two cases received five doses; one case six; one case nine, this last patient suffering a relapse. The dose is much higher than we employed in a previous series⁴ and the results, due either to the increase in dose or the particular strain used, were much better. The majority of investigators inject doses of from 100 to 500 million, and Meakins and Foster's³ dose was from 1,000 to 2,000 million of a vaccine killed without heat. The lack of ill effects from

¹ Coleman, W.: *The Journal A.M.A.*, August 3, 1912, p. 363.

² Semple and Matson: *Lancet*, London, 1909, clxxvii, p. 436.

³ Meakins and Foster: *Canadian Med. Assn. Jour.*, Toronto, 1911, p. 496.

⁴ Sappington, S. W.: *Jour. Med. Research*, 1910, xxii, p. 435.

the many hundreds of doses of various strains given by different investigators speaks for the safety of high or low amounts. We hope to investigate the point of dosage further.

The results obtained are best appreciated when comparisons are furnished. The statistics of typhoid fever in Philadelphia for the last five years are shown in Table I.

TABLE I.

Year	Population	No. of Cases	No. of Deaths	Percentage of Deaths	Death Rate per 100,000 of Population
1908	1,502,685	3562	533	14.9	34.8
1909	1,528,540	2336	331	14.1	21.1
1910	1,554,395	1745	270	15.4	17.4
1911	1,580,250	1382	223	16.1	14.1
1912	1,606,105	1514	200	13.2	12.45

It will be observed that while the frequency of typhoid in Philadelphia has been progressively reduced from 1908 to 1912, the percentage of deaths from the disease has not shown such decline and on the whole is constant, averaging 14.7 per cent. Coleman¹ states that the death rate from typhoid fever in the Bellevue and allied hospitals of New York City in the years 1908 to 1911 inclusive was 16 per cent. The results obtained in the Hahnemann Hospital from 1908 to 1912 inclusive are seen in Table II.

TABLE II.

Year	No. of Cases	No. of Deaths	Percentage of Deaths
1908	77	6	7.8
1909	76	3	4
1910	48	3	6.2
1911	38	3	8
1912	44	7	16

It will be noted as a feature that the percentage of deaths, beginning in 1909, has increased each year until it is quadrupled in 1912. But still more noteworthy is the fact that from January 1 to October 1, 1913, there were treated in the hospital thirty-five cases of typhoid fever with 31 per cent. of deaths. The reasons for this would not seem to rest with the hospital as cases have been treated by the same methods and

the same physicians for the past five years. It may be that the disease is more virulent. And it is very probable that the high death rate is due, in part, to the admission of a number of cases from outside the city in a late and almost hopeless stage of the malady. It is known, too, that the mortality in epidemics may vary widely, sometimes very low and again very high. This is illustrated in the Royal Victoria Hospital of Montreal, where, among seventy-two patients in 1896, there were no deaths, while in the following year there were seven deaths in seventy-five cases.⁵

The results in cases treated with vaccines to be conclusive should be striking when compared with patients treated without vaccines in the same institution during the same period. During the six months from April 1, 1913, to October 1, 1913, there were treated in the Hahnemann Hospital twenty-nine cases of typhoid fever with a mortality of 31 per cent. It was during this time we used vaccines, eighteen cases being treated by routine methods and eleven with vaccines. All of those treated with vaccines recovered, while in those treated by other methods there was a mortality of 50 per cent. The discrepancy here is remarkable and it will at once be suggested that the vaccine-treated cases were selected and mild while the others were severe. Such, however, is not the case, over half of our vaccine-treated patients being of the severe types of the disease in which the prognosis is very doubtful. To insure being perfectly fair toward the group of cases not treated with vaccines, however, we may exclude from their list all cases which were not in the hospital for treatment more than ten days, and we then have a mortality of 25 per cent. Two of these patients died of perforation and one of hemorrhage.

The symptomatic effects of the vaccines were most gratifying. The convincing objective evidence of improvement in the decline of temperature and the fall of the pulse was anticipated in a number of patients by the clearing of the mentality and the disappearance of toxic symptoms. The vaccine-treated subjects averaged 18.7 days of fever while those under routine treatment averaged 19.2 days. The average number of days of fever after vaccine treatment was instituted was 15.3. The average number of days in the hospital for those under vaccines was 33.7; for the others, 36.8. The days of fever and hospital treatment thus given are not markedly in favor of

⁵ Osler: *Modern Medicine*, 1907, II, p. 197.

our cases, but it must be remembered that half of the routine treated cases died and could not be included in this average. This, it will be seen, removes from calculation those severe cases which increase the fever and treatment average. In a previous series under vaccines,⁴ there averaged 24 days of fever and 46 days in the hospital. There was one complication, an abortion in a woman three or four months pregnant. Two patients suffered relapse, one of eight days and one of twenty-one days febrile duration. This is rather unusual, as most vaccine therapists have made a strong point of the small number of relapses. Callison⁶ reports 6.5 per cent. of relapses in a collection of 475 cases.

Watters⁷ calls attention to the almost universal approval of this method of treatment by those who have used it, and particularly by those who have given it the most extended trial. He has collected 1,120 cases with a mortality of only 6.3 per cent. Callison's⁶ collection of 475 cases showed a mortality of 6.5 per cent. Meakins and Foster,³ using large doses of 1,000 to 2,000 million bacteria, had a mortality of only 2.4 per cent. in 41 cases, while the death rate was 10 per cent in the unvaccinated. The fact that there were no deaths in the writer's small series of eleven cases is not particularly impressive until we compare it with the large mortality in the unvaccinated. We are quite willing, too, that the liberal diet of Coleman administered in our cases, should have its share of credit with the vaccines. But we were personally much impressed with the recovery of some almost hopeless cases in direct response to the use of vaccines.

To sum up. Statistics from a great number of observers in this country and in England furnish figures quite favorable to the vaccine therapy of typhoid fever and strikingly so in regard to the mortality. The present small series, by comparison with unvaccinated cases, corroborate these results. Even the opponents of this method, we believe, have never claimed that it does harm. It seems, therefore, strange and even unwise that the vaccine therapy of typhoid fever is not thoroughly tried out rather than mainly ignored.

ADDENDUM.—Since the above experiences the writer has had the opportunity to use the same vaccine on three typhoids

⁴ Callison, J. G.: *Am. Jour. Med. Sc.*, 1912, cxliv, p. 350.

⁷ Watters, W. H.: *Med. Record*, 1913, lxxxiv, p. 518.

of the most severe type. All three recovered, making a series of fourteen cases of typhoid fever, mostly severe, with no deaths.

THE PSYCHOLOGY OF SUPERSTITION.

BY

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(Read before the Hahnemann Society of Reading, in session at Walters Park, October 2, 1913.)

STRANGE as it may seem, with all the advances in human life, we take too many things for granted. We question the whys and wherefores of many obscure conditions in medicine, politics and religion, but many of the every-day things of life we simply take for granted, not looking for the cause or the effect. The most common commodities in life, such as paper, glass or sugar, practically nobody outside of those engaged in that particular line of business knows even the slightest thing about their method of manufacture. A man laughs, walks and sleeps, but very little does he know or even inquire as to the real *modus operandi* of his actions or conditions. Thus it is with superstition—we look down upon it or ridicule it, but with little or no idea as to the cause of or justification for our personal feeling in the matter—we fail frequently too, to appreciate the fact that where one person is superstitious and we are not, that they may not be in another direction and we may.

It is with the idea of trying to throw some light upon a very common state in the mind of man that this paper is written, many of the facts being well known, but nevertheless quite worth while thinking seriously about—namely, superstition. What is superstition? What is the cause, the nature and the effect of it? How is it to be prevented?

In all discussions it is well for the author and audience to thoroughly comprehend the terms and their meanings as used in the discourse. Therefore let the writer explain his terms. Religion and superstition run near together and yet are absolutely different as can be. Religion is a term that in a comprehensive sense means to have a belief in God as being the Infinite, and having revealed certain things to man. False religion is where belief is held in other things rather than God. Superstition is an absurd belief in things not evidencing cause and effect.

Some agnostics may say that believers in the ordinary doctrines of the prevailing churches are superstitious, but the writer firmly denies this, although having no intention of bringing about a discussion of a religious nature at the present time. The prevailing beliefs of to-day in the so-called true religions or what the author terms as such, recognize a Superior Being as being responsible for the laws of the universe and are therefore most logical, looking to God or the Great Cause or whatever other *term* you may care to use, and the resulting things of Nature are worked out through the laws that He has ordained. This is far more logical than the agnostic or atheistic views, the former not being able to conceive of the First Cause, and the second denying it, being of the belief that things just happened to be. Superstition, on the other hand, is the belief in the results without a definite CAUSE, as for instance, being afraid of eating at a table where thirteen are seated, when the food, circumstances and surroundings would be right and nobody would hesitate to eat the same food in the same house under the same circumstances and conditions if there were any other number than thirteen present.

There will be a number of proven instances enumerated which may seem trite, but which will help, the author believes, to prove several points of interest in the paper. The purpose of the discussion is to set forth a few ideas as to the workings of the mind in superstitions and let the hearers or readers more fully understand what it really is.

Superstition is a state of thought. All thought is due to cellular activity of the nerve cells capable of such action. All cells, nerve cells or others have a peculiar and constant but persistent and infallible memory for the actions which they were intended to perform. Thus you do not find a nerve cell forgetting and becoming a muscle cell, nor do you find one kind of cell performing the duties of another. The original cell from which we were made has made the memory of the cells that are in turn made from it to be perfect, and all things being equal, the cells will not forget and do the wrong thing. Intellectual faculties may be obscured, but even then the cells still continue to functionate. It is the memory of the cell that implants characteristics of parent upon child. It is the memory of parent upon child; it is the memory of action which lets the cells in embryo develop into the proper being; it is the memory of the cell which makes each act easier to repeat the next time; it is

the same thing that causes to a certain extent reflex action, and particularly in such movements as the drawing away of the hand from a hot object or putting it forth when falling unexpectedly forward. A little baby who has not been hurt by being burned will not remove the hand from the hot object, nor will one which has never fallen throw out the hand for protection. There must be the memory of some mishap to cause that particular reflex action, and in other cases memories of the various sorts according to the nature of the reflex resulting. Before going further it may be well to understand what is meant by "reflex." "Reflexes are centrifugal phenomena produced by reflexion and eventual transmutation of centripetal stimulation." There may be normal (physiological), or abnormal (pathological), motor, viscera-motor, secretory motor, secretory or trophic reflexes. The true reflex is one that consists of a neural stimulation that is reflected from one set of neurons from another.

The nerve cells and especially the brain cells develop with the proper use and degenerate with the improper use. Thus a cell that is to perform a certain duty will develop if used in its sphere and if not correctly used will degenerate. Another thing that is not fully appreciated is the fact that we do to a certain extent govern our thoughts and conceptions of things from a primary foundation. Thus a man who early in childhood has been trained either BY HIMSELF or elders to think along mechanical lines will understand and like things of that nature; one who is trained about farming will understand agricultural pursuits; but as time goes on, everyone of us has the ability to think for ourselves independent of surroundings or previous training. We then follow in the lines we have been thinking upon. Still later the cells begin to work almost, if not quite, automatically without any conscious effort upon our part. Here is where superstition comes in. Superstition is the result of—

First—Lack of mental training.

Second—Ignorance.

Third—Physical conditions—eye, ear, etc.

Fourth—Insanity, to a greater or lesser degree.

It may be stated that superstition is really something that can and should be regulated by the WILL of each and every individual. Being due to one of the above enumerated causes, it is a thing rather to be ashamed of and not to be tolerated.

Superstition has led in times past to terrible atrocities and even to-day it has caused much trouble and discomfort to thousands of people. We should train ourselves and others to be logical—not skeptical—looking for the cause and effect rather than to just believe in numerous absurdities.

All impressions are conveyed to the nerve centers or ganglia or the brain as the case may be and are there interpreted. Now, as long as the physical make-up of the body is all right, the possibility of the proper impression is assured. The nerve center may have been trained to misinterpret (as is frequently the case) or in other cases ALLOWED to misinterpret. But if the path of the nerve impulse is broken or the nerve terminal be below par or is diseased, there is the great possibility of a wrong impression being received. Thus a disease or injury to any part of the body may give the wrong impression or impulse.

It is well known that the more frequently an impression is made upon a nerve, the more readily the next impression of a like nature will be made—in other words, a habit is formed. Thus the thoughts, and conscious and subconscious acts are often become reflex and more and more reflex, and the more reflex the action or impression the more nearly it becomes a part of us. Thus, after training for anything, physical exercise, music, dancing, reading, or intellectual exercise, we act out in our lives the results of those impressions and habits. Even a given mannerism as seen in walking, shrugging the shoulders or other actions become a part of our nature and we even judge the character of a person frequently from their UNCONSCIOUS mannerisms.

Returning for a little while to the question of superstition and religion, let us consider the matter of belief in miracles, etc. Some people claim them to be mere myths, but are they? Are the ones holding faith in them superstitious and not religious? No! For in the belief in a miracle, the belief in the Great Cause is so great that it holds that the Creator of the Universe is able to do anything. In other words it is not an absurd belief, no matter how difficult to understand the how or why, or even if it be mistaken. It is a belief in the CAUSE and EFFECT. Then, too, it must be remembered that in the days that the Bible was written there were not the known things of to-day. Miracles are performed around us daily in the form of trolley, train, telegraphy (wireless and regular) and photog-

raphy and many other things that we are accustomed to seeing and therefore do not appear as miracles to us. The author firmly believes that some time every miracle will be understood either in the present or the hereafter. But we are digressing. Let it be emphasized again that a belief in a miracle recognizes at least a Great Cause and of course the evident effect. Superstition, on the other hand, does not recognize or even attempt to recognize the Cause, but emphasizes the effect. Just as we have above mentioned that a mannerism or other ways of conducting one's self, physically or mentally will form a habit by becoming more and more reflex and become a part of us, so will the belief in a result without a reasonable cause grow upon one until no longer is the cause even considered. It is to be remembered that as man is finite he cannot understand all things, but the inability to understand should not be a license for a blind acceptance of consequences and not looking for some reasonable cause. Thus it can never be proven WHY one and one are two, but we know it, and it would be futile as well as foolish to prove it. We simply know it by the nature of things.

The statement that man is finite brings to mind the fact that being so he is of course imperfect. It does not appear in just what line he may be imperfect, but he is in one line or another, one individual varying in his imperfections, as the case may be, from that of another. One person's imperfections may be mental, another spiritual and still another physical. And speaking of the physical side we will return to that phase of the discussion trying to prove later that physical imperfections will or may cause wrong impressions to be made and form a basis for some superstition and to be guarded against or corrected.

Let us consider well known pathological and physiological conditions—which could be made the basis for wrong impressions being carried to the brain and which are interpreted wrongly, bearing in mind the fact that the brain is supposed to be normal and will take care of the wrong impressions and not letting them rule the body, at least not at first, but after awhile if the impressions are continued there is a possibility and strong probability that the wrong impressions will break down the nervous equilibrium and then we may have an abnormal condition of the brain or nervous system. The first thing we will discuss will be deafness. How amusing, distressing and irritating it is to be dealing with deaf people. Suppose that a

person were deaf and they were not aware of the fact and they would repeat what they **THOUGHT** they heard! How wrong the impression would be and how their own life and that of others would be altered if the imperfection would not be recognized by others as well! In such a case the statements of the deaf would be accepted as verities for their statements being accepted as genuine as that of a normal person. Going a step further into the ear conditions—hundreds of cases present tinnitus aurium (noises in the ear) and these cases hear all sorts of sounds from a slight suspicion of one up to the hammering of machinery or escaping steam and in some cases the formation of well-formed words. The time was when this condition was not recognized as a defect and even to-day we cannot in all cases give a thoroughly accurate reason for some of the abnormal conditions of hearing. As long as the mind remains normal it can overcome this tinnitus and recognize it as being abnormal, but when it loses hold and allows these sounds to govern the actions, the brain becomes affected more or less and it is then abnormal. It can be readily seen that in the period of the age of Man when the physical sciences were not well understood that these abnormal sounds were interpreted as coming from some other source than the real one or that they originated of themselves. A true reason was not searched for. The intellects were not developed and hence the basis for wrong conclusions from the presence of these sounds.

Next we will take up sight. If a person has a normal vision they will not see any objects of strange or unusual shapes or sizes if they do not exist as such. The writer has never yet found a normal person or rather a person of normal physical and mental make-up who has seen or felt a wrong impression while in a normal state. There are times to be sure when all persons may be abnormal and at such times are readily subject to wrong impressions being made upon them. A far sighted person will see a far object distinctly and interpret it correctly while the near sighted one will either not see it at all or will see it in wrong proportions or indistinctly. Often there will be an altered mental conception of a thing by just the mere sharpness of outline being altered. There are abnormal kidney, eye and other conditions that cause floating specks and other objects in front of the eye and these objects are just as plain to the sight as any normal impression would be. A per-

son may be cross-eyed and see two objects and these objects will each be as real as the other, and yet they do not exist, and the impression is therefore incorrect.

Just as there are wrong impressions made upon the eye and ear, so there are, or may be, upon any or all of the nerves of the body, both motor and sensory. Thus the author had a case where a patient had met with a severe accident on a trolley car and the injured individual had for months the sensation as if a live mouse were crawling up the legs and at times the sensation was so accurate that the patient would slap her legs in the endeavor to knock the mouse down, and one time actually did kill a live mouse as it was crawling up the legs, not knowing of the fact until helped from one chair to another, the two sensations—the true and the false, being so identical. It is to distinguish between the real and unreal that brings the intellect into play. Besides the actual gross physical conditions so briefly hinted at, there are toxic and mental ones which may alone be the cause for a wrong sensation or impression. The brain may originate an impression as well as an idea. Toxic conditions will cause improper impressions upon the brain as is well illustrated in delirium in fevers and other diseases, alcoholics and drugs. The impressions may be pleasant or unpleasant or even frightful as the case may be. The impressions may be caused by toxic materials as the result of disease, as in the case of typhoid fever, drugs, or materials in the intestines or other organs of the body, which substances should but are not eliminated. Just as the deposit of uric acid may cause pain, the deposit of other materials in the body may cause other impressions rather than pain. This is plainly evidenced in cases of nervous disorders where there are hallucinations which clear up after a fast and intestinal lavage—the lavage cleaning away the cause of toxic absorption.

Now there is still another side, the purely mental, of impressions to be considered. If properly trained the mind will interpret properly, but if not, it will not. The mind expresses the ego or the soul and the ego can at a certain stage in its existence gain the supremacy of the mind and hold it in subjection, but it must TRAIN the mind into subjection.

This paper is not to be a history of superstition, so that phase of the subject will receive but slight mention. It may be readily seen that hundreds of years ago, before physiology or pathology were understood, or even conceived of that abnormal

impressions from within or without would be misinterpreted and form the basis of a superstition by the affected individuals and they in turn affect or bias the opinions of their associates, whether friends, family or the public, both adults and children. Then, too, before logic or philosophy were studied, coincident was probably considered as cause. Thus if a certain thing would have happened on a certain day or time that day or time would be considered as being "lucky or unlucky." As it is easier for the bulk of humanity to be illogical and not to study logic or philosophy, even if they had the opportunity, it stands to reason that in ages past as well as in the present time, many people will not look for the REAL cause and effect unless taught and TRAINED to do so. It is incumbent upon physicians and all other leaders of good thought to teach the necessity of looking for a reasonable and rational cause and effect for things and not to have irrational ideas or emotions concerning them.

It may be here stated as an axiom that there is undoubtedly a cause for every effect. It may be because of his finiteness that man can not understand in his present state of being all things, but all things are possible of explanation at some time. Thus seventy-five years ago, trolleys and telephones and automobiles were not even dreamed of: a little later they were barely considered, and now are quite common place. So the writer feels it is with the psychic realm. There will be a time present or future when all things will be or can be understood. It is necessary for us to feel the need of training our minds to the fact that we are capable of understanding. That alone is a healthy thing for us to do. It is quite unhealthy for us to feel that we cannot conceive or understand many of the things of life. It is the healthy effort to understand things that develops in us the great mind, the efficient mind; and how simple are many of the things of life when understood! How readily is electricity made! How powerful is water when simply converted into steam! And so with many of the facts of life! This is a fact for us to hold fast to while studying superstition. So many things so superstitiously accepted are so very easy of solution. This may be proven time and time again, but we will just mention one or two as proofs.

First Example:—In a certain house in New York, one certain room was supposed to have been haunted and a weird sound would proceed at certain times from this room and it was with great difficulty that anyone could be gotten to sleep there.

This became so annoying that a certain party determined to investigate and solve the matter. Sure enough! after awhile there was a peculiar sighing or moaning sound which seemed to float out of the open window. The window was closed. The sounds ceased. It was reopened with the same result. That was done a number of times and the solution of the mystery was no nearer than at first. One time just by accident the investigator happened to do something to a hanging lamp and the sound did not come that night. Upon the lamp being put back in its proper or regular position the sounds could be produced at will by the opening of the window. It was the draught of air that made the noise just as there is when the wind passes through the wires of the telegraph lines. The quality of the sound was weird though in this case.

Second Example:—Another case in mind is that of a young chap who was neither afraid nor superstitious. He was visiting on a farm and was starting to go upstairs at dusk and happened to look through an open door and saw what looked exactly like a man climbing over the fence. He looked more intently and it appeared even more so. He became a little alarmed and went up to bed, I suppose being afraid of telling anyone of his fears and thinking that the others could well take care of themselves. In the morning he came down stairs and looked and there was "the man" of the night before. It consisted of two posts of a snake fence, one of which was in its usual position and the other broken and partly fallen over the horizontal one and forming the thigh of the "man" and the upright one the body.

Explanations without number can be made for these as well as many other peculiar things that are continually happening all around. It may be a little difficult or even impossible to always give the exact explanation at once for so many of the strange things that occur, but we should endeavor to teach and have taught the *fact that these things ARE explainable.*

There is one phase of superstition that has not been thus far touched upon in this paper, and that is pow-wow and other forms of witchery. Everyone who has seen pow-wow used in inflammations must admit of the apparent result in some cases. The writer has seen several cases of intense inflammation actually relieved by the visit of the pow-wow doctor. Now, wherein does the benefit lie, and why should its practice

be discouraged? Anything that will affect the circulation will affect inflammation, for inflammation is due to a condition of the circulation. Fear, excitement, pleasure, embarrassment, etc., will all cause a flush of blood to or from the face especially, and can and do the same with other parts of the body, but of which we are not so cognizant, as we cannot observe the other parts so well. Even intense pain can be subdued by the will if we can and will get control of it. The will is made pliable when the pow-wow doctor comes and the faith of the patient is such that the circulation is slowed down and of course the inflammatory condition is calmed. Then, why oppose it? Why oppose the use of morphine? The answer in both cases is emphatic, but in the case of pow-wow because of the fact that the pow-wow process is an unnatural one and cannot be of any ultimate benefit to the sick or the well individual, and by training one's self into an unhealthy state of mind as is done in holding such a belief the result upon the brain is not of the best. The true cause is not recognized by the pow-wow doctor nor the patient, and the practice is an unhealthy one for the very simple reason that any and every unnatural impression made upon the mind is not the best for it.

It cannot be within the scope of this paper to cover the entire subject, but is hoped that we may sufficiently throw out a few hints and suggestions to those following the thought of the discourse that they will be fully convinced that all common superstitions could be investigated and shown to have a tendency not for the best of mental development of an individual.

It is hoped that it has been proven that superstition is not founded upon fact, or that it is the result of drawing the wrong conclusions. It is also believed that everyone following up the study of mental development or diseases will grant that every improper, poor or abnormal impression made upon the brain or any other part of the nervous economy is not best for the general make-up. Now here comes the vital point—any idea, impression or action that is conceived, expressed or believed in without RATIONAL reasoning must of necessity be of an abnormal nature and therefore being not rational—not THOROUGHLY SANE. Being not thoroughly sane, it must be to a greater or less degree INSANE. Hence superstition is a form of insanity—to be sure not always of a decidedly harmful nature, but just the same insane. A weakness in one direction

may lead to one in another and we should guard against all of the weaknesses that we can.

It is surprising the number of "well-balanced" people having superstitions and when their health gives away, these absurd beliefs get the upper hand of their mentality. It is wonderful how many insane persons are simply following out magnified superstitions.

Now, what can we do as physicians? Use all of our influence to teach parents, teachers and children the absurdities of all superstitions and that they are of an unhealthy nature for the minds of all people. Teach how to overcome the tendency by becoming logical—not skeptical. Do not laugh at superstition, but treat it seriously, and then you will be doing something for humanity in a service along a new but all-important line of work.

THE TREATMENT OF PLEURISY IN CHILDREN.—Concetti, of Rome, in a paper on bronchopneumonia in infancy, in the *Dublin Journal of Medical Science* for January, 1913, translated by Mahood Fox, remarks that "dry pleurisy we treat either by warm, moist packs or by painting with iodin. When fluid is present, thin, serous, slightly corpuscular, we aspirate, and we seldom find it to fail in causing the permanent disappearance of the effusion. When the pleurisy is purulent, the one indication is to remove the fluid, and the question naturally arises, Is the treatment in cases of infancy different from that of adult life? In infancy it is less difficult to attain a cure by aspiration, or repeated aspiration, without recourse to pleurotomy. If the character of the fluid is seropurulent, not too thick, and of recent formation, it is not unusual to effect a cure with one or two aspirations. Still, if the fluid is thick and scanty, you yet may effect a cure by repeated aspirations. In the presence of large collections, one or two aspirations prior to operation lessen the risk of pleurotomy. In cases of large collections in the left side, with marked displacement of the heart to the right, a rapid withdrawal of the fluid may cause shock and arrest the heart by syncope. After aspiration the fluid, if reproduced, is always less in quantity than before, and there is a tendency in the cavity to contract, and the heart becomes habituated to return to its normal position. For which reasons aspiration should precede pleurotomy."—Taken from *Archives of Paediatrics*, November, 1913.

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BUREAU OF OPHTHALMOLOGY

H. B. BOYSON, M. D., Chairman

THE RELATION OF THE EYE TO DISEASES OF THE KIDNEY.

BY

WILLIAM M. HILLEGAS, M. D., PHILADELPHIA.

It is rather surprising to find the number of works on diagnosis that practically ignore or merely casually mention the eye symptoms of nephritis; probably this may be true because of the far greater relative importance of the urinary and circulatory symptoms, and yet, there is quite a large number of cases of chronic nephritis discovered first by the oculist.

We are frequently consulted by men who complain of difficulty of vision and who think they require reading glasses, and an ophthalmoscopic examination, which it is almost superfluous to say, is always made by a careful oculist, discloses changes in the fundus suggesting nephritis, and, on referring the patient to the internist,—high blood pressure, albuminuria, and granular casts are found—interstitial nephritis in fact.

The symptoms in the eyes due to the kidneys are dimness of vision; sudden blindness which may be uraemic, haemorrhagic, or due to detachment of the retina; or possibly symptoms of glaucoma,—the dimness of vision being the most frequent.

Retinitis albuminuria, which is the most common ocular manifestation of nephritis, is found more frequently in males than in females, (about two to one) and rarely before the age of forty, although sometimes as young as twenty-five; but more frequently between fifty and sixty, and is found in from ten to twenty-five per cent. of all cases of interstitial nephritis, a fair estimate being about fifteen per cent. (Hare, 20 per cent.; Swanzy, 6 to 10 per cent.; de Schweinitz, 10 to 20 per cent.).

The ophthalmoscopic appearance of the fundus varies from white, flocculent, widely distributed spots, or rather a broad, indefinitely outlined white band around the disc, or haemorrhagic spots, usually flame-like in shape, to the more common characteristic white streaks and dots arranged around the macula like an asterisk. The haemorrhages are not constant like the white spots but are absorbed from time to time. There may even be a papillitis, and a detachment of the retina from haemorrhage is not infrequent. Glaucoma has been found occasionally as a result of kidney disease; and several cases of a low grade uveal inflammation (iritis) are on record.

In the order of their appearance the changes in the fundus are as follows:

First. Retina cloudy around disc.

Second. Haemorrhages of varied shapes and sizes, linear or flame-shaped, especially in vicinity of papilla.

Third, and most important. Lustrous white spots, round or variously shaped, irregularly placed, and also around papilla as a broad white band.

Fourth, and characteristic. A stellate arrangement around the macula of these white spots or converging towards it.

Pathology. In a few words, hyperemia, then degeneration and finally atrophy. Hyperemia of retina and swelling of the papilla and the retina in its neighborhood, fatty degeneration and exudation of the outer layers of retina due to hyaline degeneration of vessel walls, chiefly in smaller arteries and capillaries, constriction and even total obliteration of the lumen of the vessels causing nutritive disturbance in the tissue of the retina (fatty degeneration). Haemorrhages in the nerve fibre layers of the retina. Swanzy thinks the retinal changes are toxic, probably cytotoxic due to chronic uremia, but de Schwein-etz thinks the exudative or less typical type toxic, and the degenerative type due to vascular changes.

The changes in the vessel walls and the blurring of the disc, being the first changes, are of most importance from the view point of early treatment. These vessel changes precede the degenerative changes in the retina and while not pathognomonic of nephritis, they indicate increased blood pressure and suggest a urinary examination by an internist, frequently to the vast benefit of the patient. The so-called Gunn's vessels consist of tortuosity of the retinal veins, and their narrowing by the pressure of the arteries where they cross, causing dilatation of

the vein at its distal end; but a beaded appearance due to alterations in size and breadth is more significant; later on, appear the more characteristic white stripes bordering the vessels due to degeneration in its walls (infiltration of the adventitia with lymph corpuscles). The changes of the vessels in the retinitis associated with chronic nephritis are really those of sclerosis.

The retinal changes of kidney trouble occasionally come with parenchymatous nephritis, but more frequently with a granular kidney—interstitial nephritis. They also have been found in amyloid degeneration of the kidney and rather rarely in acute nephritis. Still, retinitis albuminuria does come at times in pregnancy and in scarlatina where it is surely toxic in cause. Scarlatina has often left an impairment of vision. There is also an uræmic amblyopia (toxic), sudden in its onset, and usually total, generally associated with convulsions, vomiting or coma, both in nephritis and in pregnancy. Here the prognosis is good as far as vision is concerned, the blindness generally disappearing completely with the subsidence of the albuminuria, although there may be central scotomata left. The examination of the fundus in these cases is negative.

Diagnosis. The significance of all retinal diseases must be decided by a general examination, and every case of retinal disturbance, whether pathognomonic in appearance or otherwise, should have the urine examined thoroughly and frequently.

In glycosuria, a somewhat analagous appearance of the retina is found, except that the white spots are smaller and not characteristic.

Neuro-retinitis from intracranial diseases may simulate albuminuric retinitis, especially the papillitis; in choroidal atrophy the white spots are surrounded by black pigment heaping.

The prognosis in the case of nephritis in which retinitis is discovered is rather grave. The sight of an albuminuric retinitis is really a death sentence, two years being the average length of life under such conditions. Under appropriate treatment, however, (internal), the life of the patient can be prolonged and there are cases in which the patients have lived much longer, but we hesitate to make such promises. I recollect one case sent me by an honest refracting optician, with the characteristic stellate white streaks around the macula, blood pressure 210, a few granular casts intermittent in their appearance, and albuminuria, who refused all treatment because it in-

cluded stopping his rather large daily consumption of whiskey. That was in 1907. This patient is still alive although he has had some rather severe uraemic attacks and retinal haemorrhages.

Fortunately the degree of visual disturbances is not proportionate to the changes in the fundus and consists of a general dimness, very rarely sufficient to prevent the patient from going about alone, some scototata and at times blue blindness. As for treatment—it is useless to do anything whatever for the eyes or to the eyes.

In dispensary work I have seen some of the general dimness of vision clear up under cuprum, arsen. 2x; but in private treatment we insist on treatment by an associated internist. Sub-conjunctival haemorrhages, especially if recurring, are often indications of nephritis and arterio sclerosis and should not be lightly passed over without an ophthalmoscopic examination.

Chronic Bright's disease, while a complicating condition, does not contraindicate operation for cataract.

The occurrence of albumen in pregnancy is not uncommon, from two to twenty per cent.; but retinal involvement in these cases is not very frequent. It occurs mostly in primiparae, usually in the second half of pregnancy and most often is of the inflammatory exudative type. With the termination of pregnancy, the inflammatory process subsides and good vision results providing degeneration has not taken place. If the trouble arises before the sixth month of gestation, the pregnancy should be terminated in order to save the vision.

DISCUSSION.

DR. G. W. MACKENZIE, Philadelphia.—I think that Dr. Hillegas has been more fortunate in his cases of retinal hemorrhage than some others have been. Five years ago, Elchner, of Prague, pointed out that when you find in cases of Bright's disease that hemorrhages occur in the retina, the patients have not more than eighteen months of life ahead of them, and the average patients have not more than eight or nine. The case that Dr. Hillegas has cited, I saw with Dr. Whinna, and the patient had multiple hemorrhages in both eyes, although not large ones. The blood pressure was not high—210. The man looked quite well, and was about fifty years of age. When

I said that this man was doomed, they would not believe me; but he died two weeks after being seen. They gave him electrical treatment, which was rather vigorous.

Another point that I wish to mention is that in cases of retinal hemorrhage in diabetes I always take the blood pressure. When hemorrhages occur in the eye in diabetes, even a comparatively low blood pressure may be dangerous. One such patient of mine had a blood pressure of 150, which was not seemingly at all bad for his age; for you often have cases of nephritis with a blood pressure of 230. The blood pressure gives the cue for the treatment. In the cases of diabetes I believe that the hemorrhage is not due so much to great intra-vascular tension as to the condition of the blood itself. The blood is so degenerated as to go through the vessels easily in diabetes; whereas in Bright's disease, the force of the blood pressure drives it through and causes the rupture of the vessel. The same form of treatment, therefore, will not do for both of these conditions.

PHLYCTENULAR OPHTHALMIA.

BY

S. B. MOON, M. D., PITTSBURGH.

PHLYCTENULAR ophthalmia, a shorter term for phlyctenular conjunctivitis and keratitis, is a disease most common between the ages of one and twelve years. It is the most frequent inflammatory eye trouble with children and it may cause a disturbance of vision for life. For this reason the proper care and treatment during an attack is most important.

Defective nutrition as found in strumous constitutions is considered the prime cause. No doubt environment and improper diet play their parts as causative factors.

In the early stage inspection shows a nodule, one or more, located on the bulbar conjunctiva or cornea, most frequently found on the limbus of the conjunctiva or the periphery of the cornea, leading from this is a circumscribed collection of dilated blood vessels somewhat triangular in shape, with its apex at the nodule or phlyctenule.

These nodules disappear by resolution, or by breaking down and forming an ulcer. As long as the ulcer is confined to the conjunctiva there is no danger to permanent visual disturbances. It is when located on the cornea that the vision is im-

paired and the more central the ulcer the more defect to vision results. The depth of the ulcer has much to do with the permanency of the scar. If the ulcer is superficial the scar or opacity usually clears up, but if the deep structures are involved, the opacity is likely to remain.

A ruptured phlyctenule forms an abrasion and exposes the tissues to infection from any or many micro-organisms that may be in the conjunctival sac. (This suggests at once the importance of cleanliness and the local use of antiseptics to prevent infection.)

The usual symptoms are pain, lachrymation, photophobia and blepharo-spasms. Sometimes a muco-purulent discharge is present and may confuse the diagnosis; however, this conjunctival discharge is a complication and no doubt a coincidence.

Infected ulcers may involve all the thickness of the cornea and cause a perforation, resulting in a prolapse of the iris, disturbed vision and a permanent disfigurement of the eye, or they may be located on the periphery of the cornea and extend around the entire circumference, causing a sloughing of the cornea and resulting in a total loss of vision. Iritis may accompany the ulcers and firm adhesions form that often impair the vision. These complications or conditions are the dangerous ones to be most dreaded and require energetic treatment to check them. Expectant treatment will fail, so here we must use heroic measures.

The best results in the conjunctival form are obtained by the local use of oxide of mercury ointment—2 per cent—twice daily, a piece the size of a pin head placed on the conjunctiva by means of a small glass rod, or calomel may be dusted on the ulcer; some cases respond very promptly to argyrol—10 to 25 per cent. solutions instilled in the eye two or three times a day. Cold applications will often relieve the blepharospasms. When the cornea is involved, hot fomentations are best, the use of yellow oxide of mercury ointment one per cent. and atropine one half and one per cent. solutions, sufficiently often to keep the pupil dilated. If the ulceration increases in size and depth or changes its location by traveling about the cornea, cauterization of the ulcer may be necessary to check it. Either the galvano cautery or trichloracetic acid 25 to 50 per cent. solution. In using this acid great care must be taken that the solution does not spread over the cornea, to avoid this the applica-

tor must not be over saturated. I have found this method just as effective as the galvano cautery and a means easily procured. When finding a deep ulcer with its base elevated or ballooned in appearance, it will require an incision through its base, after having contracted the pupil with eserine 1 per cent. solution. London smoked glasses gives the eye the needed protection from light and are to be preferred to a bandage or an eye shade, especially so if there is a muco-purulent discharge. A pressure bandage will be needed if the ulceration extends around the periphery of the cornea.

The child's environments should be plenty of outdoor air and strict cleanliness of the hands and face. Never allow a child to remain in dark corners. The diet should consist of good nutritious food, plenty of milk, eggs and meat. Candies, pastries and highly seasoned foods are injurious.

Internal medication is very important and each case must be individualized. A careful study of the symptoms with the proper selection of the remedy will shorten the duration of the attack and give the tissues greater resisting power.

The most frequently indicated remedies are hepar sul., sulphur, mercurius, graphites, arsenicum iod., kali mur. and cannabis sativa. The last one named is well indicated in the early stages when there is a marked burning sensation, profuse lachrymation and photophobia and has given me much better results than euphrasia.

DISCUSSION.

DR. WILLIAM SPEAKMAN, Philadelphia.—In the treatment of ulceration of the cornea I have found a satisfactory remedy to be the application of intensely hot water—as hot as can be borne. In some cases, it is necessary to employ cocaine to the eye locally, especially in children; but adults can usually bear the application without the use of the cocaine. Water absolutely boiling hot can be borne on the cornea, but care must be taken not to get it on the eyelids.

A NEW INCISION FOR EXTRACTION OF HYPERMATURE CATARACT.

BY

J. K. M. PERRINE, M. D., PITTSBURGH.

So many articles have been written upon accidents in cataract operations, that the ophthalmologist is inclined to believe that there is scarcely anything new that can be said on this subject.

However, the author wishes to relate how he successfully got out of one of the most perplexing positions that it has been the misfortune of any operator to get into. The case being a hypermature cataract, it may be of importance to give a brief history of it.

Mr. K. was referred to me by his family physician, about three years ago. I found a ripe senile cataract in the left eye, and one about 50 per cent. developed in the right eye. There did not appear to be any complications and operation on the left eye was advised. After several talks with the patient, I lost track of him.

On March 12, 1912, he again consulted me and was practically blind, the cataract in the right eye having matured. Through the influence of an optometrist he had gone to an advertising eye infirmary, where he contracted to have his eyes cured without operation in a given space of time. At the expiration of this time he was not improved, but practically blind, nothing but feeble light perception left. About this time said institution was closed by the city, and the patient's money refunded. I hesitated about which eye I would operate first. There was evidence of a better chance for success in the right eye, for there was every reason to expect the left eye to be hypermature.

After careful consideration, however, it was determined to operate the left eye first. The patient consented and entered the hospital, where a successful iridectomy was performed, and the patient discharged on the sixth day. A month later he returned to the hospital and extraction was completed successfully. A fairly large grape knife was selected. As the point was passing over the iris into the anterior chamber, the lens at once pushed forward and the iris rolled over the blade. By very gentle manipulation, I succeeded in withdrawing the blade with but very little injury to the iris. It was then a ques-

tion as to how the incision was to be completed and the lens extracted. A very large keratome was inserted in the superior median line at the margin and made to enter as far as possible. After withdrawing the keratome the incision was made complete by a series of cuts accomplished with a grape knife in the following manner:

The point of the knife is entered at the end of the incision made by the keratome. The point is then directed outward and made by very slight force to pass through the margin of the cornea, it may be necessary to make from three to four such punctures on either side of the corneal margin to complete the incision. This procedure gave birth to the idea of making the complete incision with a broad keratome.

I had a keratome modified by having it ground very thin so as to have as little resistance as possible while passing it through the cornea. The incision is accomplished by two cuts. The keratome being a very broad, short one, is entered—say first at about 2 o'clock on the margin of the cornea and pushed on until one edge is on the horizontal median line, and the other edge at the vertical median line; the keratome is then withdrawn and inserted at about 10 o'clock and pushed on until one edge is at the horizontal median line and the other edge communicated with the first vertical incision.

The idea of this procedure is to have control of the lens and hold it back by the broad blade of the keratome. The operation was tried on the patient for extraction of the lens of the right eye and was very successful; when the second cut was completed and the keratome withdrawn, the lens popped right out, which proved it to be hypermature, and, pushing forward, which would have caused the same complication that was met with in the first eye.

Patient is now wearing—

OD+10.00 Sph. +2.00c90°

OS+10.00 Sph.+1.00c90°

for distance, and

OD+13.00 Sph.+2.00c90°

OS+13.00 Sph.+1.00c90°

for reading, giving almost perfect vision.

DISCUSSION OF DR. PERRINE'S PAPFR.

DR. WALTER.—Was the second incision done immediately?

DR. PERRINE.—Yes, it was done immediately after the first.

It struck me at first that this might cause the wound of the first incision to gap, but that was avoided by making further traction on the keratome, thus pushing the cornea in such a way as to hold the wound down on the other side. The second incision must be done with more care than the first.

DR. H. R. STEPHENS, Wilkinsburg.—In making the second incision with the keratome, does that complete the incision?

DR. PERRINE.—Yes.

DR. STEPHENS.—I should think that there might be trouble in doing this.

DR. PERRINE.—It looked a trifle that way to me at first, but I was astonished at the easy manner in which I got through with it. I want to say that particularly for a man who is not ambidextrous, it almost looked to me as if there must be trouble in performing this operation. Of course, I have done only one case successfully in that way; but if a man who is not ambidextrous could practice that incision, it would be worth something.

DR. WILLIAM SPEAKMAN, Philadelphia.—I was unfortunate in not having heard the beginning of Dr. Perrine's paper; but I must say a few words regarding it. I cannot reconcile myself to putting a knife into an eye with a prolapsed anterior chamber, for the reason that the crystalline lens and the vitreous have advanced to approximate the posterior surface of the cornea. It seems to me that the danger would arise from the fact that you are operating on a flaccid eye and an eye with a lack of resistance, owing to the escape of the aqueous humor. I do not know whether I correctly understood Dr. Perrine's explanation for his use of the keratome; but I do not see why one could not employ a slender von Graefe knife, as we do in an ordinary linear extraction. The danger in sticking a keratome in at the second incision would, I should think, be very great. I recall seeing Dr. Thomas, at one time, accidentally introduce a knife upside down. He immediately withdrew it, and allowed the wound to heal. He waited a week or two, until repair had taken place, before going on with the operation, in order that he might have a full anterior chamber in which to operate. That has been my own custom in cases in which there has been an escape or weeping of the aqueous sufficient to cause the iris to advance. In such cases I remove the knife and wait until the anterior chamber has reformed. Possibly Dr. Perrine is more dextrous in the use of the keratome than I am.

DR. PERRINE.—I should like to ask Dr. Speakman whether

he has ever tried that procedure. He said that he had not heard the first part of my paper. A piece of the iris having folded itself clear around the blade, to withdraw it might have caused an extensive laceration of the eye; and to go on with the operation would have meant to take half of the iris out. The knife that I had ground for this operation is about as thin as tissue paper, and instead of being set at an angle like the ordinary keratome, it is set at an obtuse angle, the point being fixed in such a way with the blade that with the collapsed cornea you stand a better chance to go ahead and complete the operation than to take the risk of infection that is so much dreaded by all of us, especially in cataract operations.

I expected quite a few remarks on this operation, because I felt exactly as Dr. Speakman does before I attempted it. I thought, however, that it could be done, and I did it.

PSYCHOLOGY OF DEFECTIVE VISION IN THE ELDERLY AND AGED.

BY

HENRY W. CHAMPLIN, M. D., TOWANDA.

A MAN traveling through a portion of the country where illiteracy and shiftlessness were much in evidence asked a native at the little station how the inhabitants occupied their time. It was answered: "Why, sometimes we set and think, and sometimes we jest set; mostly we jest set."

So there are those in the decline of life who do little else than sit; or at most, only sit and think. Unfortunately the latter is of little profit as their thoughts have not been replenished from the world's lore, of which there is a superabundance in the profusion of good literature available.

As eye specialists we observe the relation of good vision to keen intellects, well informed minds, excellent conversationists, masters of English, delightful entertainers. On the other hand, there are those with defective eyes, not reinforced with suitable artificial help, who spend their time in a listless, indifferent way; whose conversation is gossip or petty personal or family affairs, and whose thoughts are not better than their conversation.

The former may have had defective refraction and uncomfortable use of the eyes, but corrected early with glasses so that studious habits were not interrupted. These correcting lenses are worn constantly, and when the age of old-sight is attained bifocals are always on the face. The pleasure of reading prompts a change of lenses the moment that the use of the eyes becomes uncomfortable. The glasses are adjusted to all distances; nature and art alike appeal to, edify and refine the intellect. The horizon is far, far away; the world near at hand yields its secrets. A knowledge of history, philosophy and science, not only puts on the polish of a finished exterior, but also promotes patriotism, piety and prudence. The more extensive our perspective the smaller becomes self in contrast; thus we are saved the fault of the exaggerated ego.

How often we refract those in their early forties who have never worn glasses, but from the defects we find we know should have worn them from their earliest school life. We note a lack of literacy; they tell us of headaches in early life, and the memory of a strong disinclination for school and study. The reading habit was not fostered; though often a fondness for literary lore was realized, which could not be indulged on account of great discomfort from use of the eyes. We know from present examination as well as the history of such cases that considerable defects of refraction have existed throughout life.

Thus the whole course of life has been changed. Instead of the studious and well-informed individual we have one with a dearth of ideas; instead of a man of scholarship we have one with sluggish mentality and indifference to education; instead of a factor in every good cause we have a loafer and a laggard; instead of a useful citizen and intelligent voter we have a menace to good government. And all of these deficiencies conduce to vicious habits and criminality.

Some who have had defects of refraction throughout life have acquired a fair degree of scholarship in spite of the handicap, and without optical aids. These come to us in their forties and fifties desiring glasses for reading, as the need has become painfully apparent. They have a distant vision of 20-50, 20-70 or worse. They say that they see well enough for distance—that they see just as well as they ever did—and will not wear a distance correction. Their vision has been lost so gradually by a latent eye strain coming to the surface—becom-

ing manifest, that they do not realize that distant vision is not as good as ever, or as good as that of those with normal eyes. But they do realize that ability to see at the reading distance has declined, and it is indeed a mental dullard who does not wish to read a little these days. So we are called on for glasses, but for reading only. We insist on bifocals and give our patients excellent distant and near vision, but if such candidates for spectacles are well up in their fifties the distance correction is not appreciated and the glasses not used except for reading.

Now we may say that it is entirely optional with the patient how and when he uses his glasses. But the purpose of this paper is to show that we do have a duty in the matter. When one takes his defective eyes to a mere dealer in optical goods it is the patron's prerogative to dictate, and the dealer's duty to comply. As medical eye specialists we are expected to make a diagnosis of the eye and its needs with reference to the highest welfare of its owner. We are, indeed, derelict in our duty if we fall short of this high ideal. If we look upon it as a mere commercial transaction we lower ourselves to the level of jewelers and "satisfaction guaranteed" spectacle peddlers.

The time is coming when the eyes of children of school age will be well cared for. At present tests for defective vision are quite generally made in the public schools. Note, this for defective vision,—not defective refraction, except perhaps in the larger cities. Hence, results are disappointing and misleading. Many cases of latent eye strain and low degrees of astigmatism escape with a favorable report, and are thereby deterred from consulting an oculist with reference to asthenopia and headaches. When the school tests are properly made by specialists the one class will be eliminated from those under discussion in this paper.

In that case we shall have only to consider those who have neglected to have their presbyopia or old-sight accurately corrected at the proper age. Too many have, from misinformation in the matter, attempted to wear lenses perhaps to some slight extent helpful, but not so comfortable as to encourage constant use. To those who come within the strict limits of this paper—the elderly and aged—we owe the duty of educating them to what they ought to require in optical aids.

To promote the constant use of glasses we should have an opportunity to spectacle our patients in their earliest forties

while single lenses may yet be worn. Thus the art of wearing glasses may be acquired before bifocals need to be mastered. Then at forty-five or thereabouts bifocals are prescribed for constant wear if practicable. I emphasize this upon specialists for the reasons contained herein. And I bring it before this gathering of general practitioners to urge their co-operation in this very important factor in the mentality of our elderly patrons.

In certain cases when one function is inactive increased energy is supplied to others. The ears of the blind are quickened; but do any senses profit by neglect to maintain good and easy vision? Rather the reverse. Loss of visual acuity is surely a factor in the deterioration of mental activity. Non-use of the visual faculty causes a loss of the same; want of feeding the mind through the eyes produces mental deterioration. The results are co-equal according to the time involved. Hence, I say, our services should be required before there is conscious loss of vision, and the spectacle habit should be acquired before the eyes fail.

As I have said, too often our patrons have lost vision so insidiously that it is not missed, and though we may be able to restore it to 20-20, yet from want of appreciation of acute vision, and the incumbrance of glasses (especially bifocals) on the face not yet mastered, the correction is not worn. Then, too, the brain cells at the sight center and perhaps the receptive parts of the eyes have been so indolent and quiescent that it really tires them to get busy again. The patient prefers to keep this wonderful faculty dormant. Poor vision has conduced to mental obtuseness, and the sluggish mind is not favorable to maintaining good vision.

And does not this affect all of the qualities of the mind, and conduce to general sluggishness, indifference, and decay? Do we not note in the aged a laxity contrary to the conduct of early life, a blunting of the moral sensibilities? Instead of a shock of corn fully ripe we have premature mental and moral necrosis.

Is it within the sphere of the medical eye specialist to influence the course of life to promote ripe old age instead of senile debility—dementia—so to speak? Mental decay should be deferred by promoting and maintaining mental activity. There is nothing else that can so effectively and profitably keep the mind busy as the eyes, and that the work of the latter should

be made as easy as possible is evident. It is not a mere matter of throwing a cheap pair of glasses astride the nose in an indifferent position and with lenses of poorest quality. It is a matter of great skill with scientific and painstaking precision. Eyes are especially over-used as the physical powers fail from age, recent illness, or chronic invalidism. When we consider this most delicate and wonderful faculty with its relation to mind, morals and health, then we realize the importance of our specialty.

It is not outside the limits of my subject to consider the importance of giving the elderly and aged good visual acuity by correcting errors of refraction in early life. Indeed, it is too late to save many eyes after the tenth year of life. Many are blind, hopelessly so, in their earliest teens, with amblyopia from anisometropia—unequal vision in the two eyes—and want of binocular vision.

The practice is still too much in vogue to take the eyes to those not fully competent to advise in the matter of defective refraction as revealed under medical treatment and diagnosis. This paper would fall far short of practical value if it fail to impress upon general practitioners the far greater importance of having their patients properly refracted and spectacted than many manifest in their apparent indifference in the matter.

The obligation in the case of children is being gradually recognized and the little patients are referred to oculists after all other treatment has failed. If you general practitioners could but know how much glory you might get for your treatment if your patients could have the benefit of a correct refraction at the same time you would not be so slow to refer the cases to us. Almost as fully and truly does the same apply at the second important decade—the forties. The importance of this latter period is the plea of this paper.

As I have attended medical conventions from time to time I have made critical observations on the manner in which physicians of middle age wear their glasses. Those which I have had special opportunity for studying have been spectacted in a very indifferent manner. The lenses are usually held on the face in such a faulty position that right results are impossible even if of the right formulae. It is not common for these practitioners to go to oculists, and the same indifference is manifested with reference to patients. As oculists we are derelict. We have not impressed the general practitioners with the

difference between supplying merely satisfactory glasses and those which are fully right and helpful to the maximum degree.

As I have endeavored to show, it is not a mere matter of seeing; neither is the conservation of nervous energy the whole end to be attained, important as that is. It is a matter of mental and moral qualities in young and old. It is proverbial that we see the world through different colored glasses. Have our various erratic and defective minds created these glasses for us, or have we by seeing things imperfectly, indelibly and permanently impressed our minds accordingly? Both are factors, and both results, no doubt. It is only by a knowledge, broad and deep, that we can construe the world's facts aright, draw proper conclusions and come to right results. Keen mental perception is a product of proper use of a visual acuity of the highest order. The opportunity and the necessity of using the eyes far more than normal are universally prevalent throughout the civilized world. It behooves us as medical practitioners to do more and better for the eyes, and the minds and bodies through the eyes, than we have ever done before.

REPORT AND DISCUSSION OF A CASE OF OCULAR VERTIGO.

BY

G. W. MACKENZIE, M. D., PHILADELPHIA.

VERTIGO may be defined as that unpleasant feeling of confusion which results from any false perception of one's position or motion in space.

A proper conception of our position or motion in space results only when our various perceptions gained through the eyes, equilibrium sense organs in the ears and kinesthetic sense organs in the joints, muscles, etc., balance one with another. If any one of them should misinform us, thereby contradicting the remaining two, then instead of the normal conception there results a misconception or confusion which we term vertigo.

The character of the vertigo differs somewhat in different cases, depending upon which of these three organs is at fault. For a detailed description of this part of the subject the reader is referred to an article on vertigo by the writer, "Labyrinth Papers."

In each case of vertigo the facts to be determined from the history and findings are the type and the cause of the vertigo. This is not always as easy as it seems. Patients suffering with vertigo for any length of time are prone to become neurotic and hypochondriacal. The case to be reported is in no way an exception to this rule.

The history of the case was so full that it was impossible to obtain it all at the first visit. As a result, I received it somewhat disjointed but none the less complete. In presenting it to you I shall use, as far as possible, the patient's own expressions.

THE CASE.

W. B. K., age 38 years, referred by Dr. H. M. Gay, April 29, 1909. History: As a child the patient had smallpox and measles. Later in life he suffered several attacks of renal colic. Fifteen years ago he suffered from tapeworm, at which time he also complained of palpitation of the heart. On one occasion a physician diagnosed uric-acidemia. Personal habits are good. He has never used tobacco or alcohol. Has three living, healthy children. Syphilis is denied. He has taken quinine in the form of bromo-laxative for colds, self prescribed, has never taken salicylates. He has never worked in lead, mercury or other poisonous metals.

Present Illness: The patient noticed dizziness, for the first time, ten years ago after looking up at a fireworks display. With this attack patient had the subjective sensation of falling backward. Since then the patient has suffered from attacks of vertigo, especially pronounced when looking upward. He claims to have suffered attacks so severe that he has felt as though he was traveling through space at a rapid rate and was compelled to hold fast to fixed objects for support. At the same time he would become pale in the face (at least he was so told by friends who happened to see him at such times). He has also experienced dizziness when looking at passing trains, also when alighting from a train. Vertigo is experienced, too, when walking down grade.

In the spring of 1905 the vertigo was very intense and almost constant. In July, 1905, bromide of strontium was prescribed by the physician then in charge who also referred him to a very reputable oculist for refraction. Glasses were prescribed. Two months later the patient observed some relief of the

vertigo for a few months. During this period of relief he gained several pounds in weight; when, one day after partaking of kidney stew he experienced a severe attack of vertigo.

At this junction the writer applied a few questions which brought forth the following answers:

- (a) Never had earache.
- (b) Never had impairment of hearing.
- (c) Has tinnitus of buzzing character at times, always in left ear with one exception, when he had buzzing sounds in right ear after stooping to lift his child up on a pony.
- (d) Never saw double.
- (e) Has taken quinine on his own initiative for colds, in doses sufficiently large to produce tinnitus and slight dizziness.
- (f) He believes that he had a running ear for a brief period during infancy—teething period.
- (g) After blowing hard for some time he gets vertigo.

The patient acknowledges being nervous and anxious. His greatest anxiety is to get well. He fears if he does not he is liable to lose his position which is a responsible one and pays a fairly good salary. He gets up in the morning with headache, more particularly in the back of the head. This headache has lasted for several months. He suffers from dull aching pains in his legs but has no sharp pains.

The patient described his vertigo between his visits as a sensation of rapid swaying to and fro (in the sagittal plane). During a recent attack his wife observed that he was actually moving. He suggested that the inclination of his head backward, while his wife was putting drops in his eyes, might have been the exciting cause of this recent attack of vertigo.

The patient claims to be able to produce vertigo by inclining his head backward and looking upward, for he has repeatedly observed that looking upward at a high building produces vertigo.

After the use of a mydriatic the patient complains more of vertigo than before. He observes no difference in the intensity of the vertigo with his present correction glasses on or off. During the entire period of ten years the patient has been more or less under the care of physicians. During the last four years he has been quite constantly under treatment by his family physician together with his former family physician, a reputable oculist, a consulting neurologist and an internist. For two

years, while under the care of the neurologist, he claims to have been saturated with massive doses of K. I. without benefit.

In view of the fact that the most constant factor in precipitating an attack of vertigo was looking upward; for instance, at fireworks and tall buildings; furthermore, realizing that when doing so both the head and eyes are simultaneously rolled upward and backward, it became necessary to learn which of these combined acts played the sole or major part in the production of the vertigo. To aid us in the solution of this problem the patient was directed to make the following experiments at odd times between his visits.

(1) With head fixed, look in an upward direction at some object above the horizontal plane thereby excluding the equilibrium organs in the ear.

(2) With the eyes closed, move the head backward and hold in that position for a moment or two as though looking at a tall building for the purpose of excluding the eyes.

(3) Should an attack of vertigo come on spontaneously at any time, close and open the eyes at intervals and note under which condition the vertigo is more pronounced.

On his next visit the answers to these questions were quite positive, he claimed that the vertigo was quite constant with the eye movements alone but not so with head movements alone. He observed further that closing the eyes ameliorated the vertigo when present.

Equilibrium tests were made at the office with eyes open and closed, invariably when looking downward his gait was normal, while when looking upward it was considerably disturbed.

Not to discount the inner ear as a possible factor in this case, a complete functional examination of both acoustic and static functions was made with the following findings:

Right Side.		Left Side.
8 Meters +	Conversation Voice	8 Meters +
6 Meters +	Whispered Voice	6 Meters +
6 Meters +	Acumeter	6 Meters +
	Weber	Not lateralized
Normal	Schwabach	Normal
Positive	Rinne	Positive
Normal	C1	Normal
Normal	c4	Normal
Normal	Bezold a1	Normal

Spontaneous Nystagmus: Slight degree of mixed rotatory and horizontal nystagmus to the right when looking to the extreme right and to the left when looking to extreme left; but, to neither side more pronounced than to the other. No spontaneous nystagmus when looking straight ahead.

Turning Nystagmus: After ten turns to the right with head erect, horizontal nystagmus to the left lasting twenty-three seconds.

After ten turns to the left with head erect, horizontal nystagmus to the right lasting twenty-three seconds.

Galvanic Nystagmus: Right Ear. Kathode, 6 milliampere, produced rotatory nystagmus to the right: Anode, 6 milliamperere, produced rotatory nystagmus to the left.

Left Ear. Kathode, 6 milliampere, pronounced rotatory nystagmus to the left: Anode, 6 milliampere, pronounced rotatory nystagmus to the right.

In other words, unlike polarities on the same side produce the same amount of reaction with the same intensity of current, and like polarities on the opposite sides produced the same amount of reaction with the same intensity of current.

There was a slight disparity in the opening and closing nystagmus of the two sides which showed the right ear very slightly more reactive than the left but the difference was so slight as to be questionable.

Preliminary eye examination showed the following:

Eyes moved well and together in all directions, however, in looking upward there was a distinct tremor, especially in the right eye—vertical nystagmus upward—tension normal in both eyes. Convergence good. Eyes are stationary under cover. Conjunctiva quite normal. Lachrymal apparatus normal. Pupils round, of equal size and react promptly to light, accommodation and convergence.

Oblique illumination with Sach's lamp—the cornea is brilliant and transparent. Anterior chamber of normal depth. Irides normal texture. Pupils round and black, both eyes.

Ophthalmoscope: Media clear. Disc round with well defined edges. Normal physiologic cup. Size and distribution of vessels normal. Fundi, including macular region, normal, both eyes.

Patient was wearing the following correction:

R.+0.25 D.Sph.+0.25 D. Cyl.Ax.75°Pr.½° base up.

L.+0.50 D. Sph.+0.50 D.Cyl.Ax.90°

which gave the patient 6-5 full vision in each eye.

A preliminary eye muscle examination was made. With Maddox rod before the right eye, in the position to produce a horizontal streak of light. He saw at six meters distance, the streak of light appear about two inches above the bull's eye. With a 2° prism, base up, before the right eye or base down before the left eye, the streak passed through the bull's eye; which proved the presence either of a right hypophoria or left hyperphoria. The patient also manifested at this time a $\frac{1}{2}^{\circ}$ esophoria for distance.

Realizing the severity of the patient's condition, the length of time he had suffered and the failure of others to bring him relief, I decided that the case warranted most careful refraction and study under an effective cycloplegic. Accordingly, atropin 2 grs. to the ounce was prescribed, one drop in each eye t.i.d. for ten days. During this time and afterward repeated examinations were made with the retinoscope, stenopaque test, cobalt blue test and cross-cylinder method. There were some minor contradictions which made repeated examinations necessary. The ultimate result of my examinations led me to accept the following correction:

R.+0.50 Sph.+0.37 Cyl.Ax. 90°

L.+1.50 Sph.+0.75 Cyl.Ax. 105°

This correction was not prescribed immediately for I had found that the apparent right hypophoria was very variable. At one time it was $1\frac{1}{2}^{\circ}$ at another 2° and still other times $2\frac{1}{2}^{\circ}$. Furthermore, it was noted that the amount was greater when the cycloplegia was marked than when it was not present; a fact that I have noted in at least two other similar cases with vertigo.

I learned further that for this case, at least, the Maddox rod test was not the most satisfactory for ascertaining the degree of muscle imbalance. I therefore tried other methods, the most satisfactory of which was the plain red glass before the right eye. In making this test at six meters distance I had the patient (a) to look straight ahead and with the head erect; (b) to tilt the head forward so that he was compelled to look upward at the fixed light; (c) to tilt the head backward so that he was compelled to look downward at the fixed light; (d) to turn the head to the right so that he was compelled to look to the left to see the light; (e) to turn the head to the left so that he was compelled to look to the right; (f) to turn the head down and to the left so that he was compelled to look up and to

the right to see the light and so on with the remaining oblique positions. In brief, observations were made in nine positions and recorded. Besides, similar observations were made in these nine positions at close range (fifteen inches).

At all times and after repeated examinations it was found that when looking downward there was practically no vertical heterophoria. With the eyes directed straight ahead there was distinct right hypophoria varying from $1\frac{1}{2}^{\circ}$ to $2\frac{1}{2}^{\circ}$; with the eyes directed upward there was distinct hypophoria or rather hypotropia of from 4° to 6° combined with jerking movements upward of the right eye only, proving to me that the right superior rectus was paretic. These last findings clinched the diagnosis, which, up to then I had merely surmised, i. e., vertigo due to paresis of the right superior rectus eye muscle. I felt sure that if we could correct the paresis we could cure the vertigo.

How was it to be done?

If we should attempt the use of prisms strong enough to correct the muscle imbalance for the upper field we would over-correct for the horizontal plane and produce an artificial heterotropia of opposite character for the lower field and the patient would probably be even worse off than before, since we all use the lower field more than we do the upper.

If no correction was attempted at all the condition would be likely to remain as it had been. It was decided to correct just enough of the error to encourage the weak eye muscle to greater activity than it was previously inclined to, but less than enough to produce any pronounced degree of opposite imbalance for the lower field. The correction prescribed was:

R.+0.50 D.Sph.+0.37 D.Cyl.Ax.90Pr $\frac{1}{2}^{\circ}$ base up.

L.+1.12 D.Sph.+0.75 D.Cyl.Ax.105Pr $\frac{1}{2}^{\circ}$ base down.

In addition the patient was given home exercises with prisms after the usual method, including all the muscles, but with greatest attention given to the right superior rectus.

Muscle strength, at this time, with patient's head erect and bull's eye at six meters distance on a level with the eyes, showed abduction 4° , adduction 15° , right supra-duction about 0, right infra-duction $2\frac{1}{2}^{\circ}$. These diminished figures alone are an indication for the liberal use of prisms for exercising purposes.

Week after week perceptible changes, by way of improvement, were noted, more particularly with right supra-duction. At times, however, there appeared to be a temporary cessation

with a recurrence of vertigo. The patient himself became very much interested in his exercises and lent every possible assistance. At the end of three months the improvement was so marked that the patient was quite willing to drop one half of his prismatic correction. At the end of another month the remaining half was dropped. By this time his abduction had increased to 8° , adduction to 60° , right supra-duction $2\frac{1}{2}^{\circ}$ right infra-duction to 4° .

In the meantime he was started on fusion exercises with the Kroll stereopticon set. Its earlier use was impossible for the vertical imbalance was too great and the Kroll set, like others of its kind, are constructed more especially for cases of lateral or horizontal imbalance.

By August 24, 1909, a trifle less than four months, the patient showed no vertical imbalance when looking straight ahead and but $\frac{1}{2}^{\circ}$ in the extreme upper field.

There were slight recurrences of muscular weakness accompanied with vertigo, until October, six months from the time he was first seen. I had him to report every four or six weeks thereafter until the following spring, 1910. Since then the patient has been entirely free of vertigo and has maintained a normal muscle balance. He learned to use the Maddox rod himself to ascertain his muscle balance and up to a year ago would occasionally call me on the 'phone to tell me that everything was O. K.

DISCUSSION OF DR. MACKENZIE'S PAPER.

DR. WILLIAM M. HILLEGAS, Philadelphia.—I wish to compliment Dr. Mackenzie on the success that he has obtained in his case, which came from the thoroughness of his examination. I am convinced that there are a number of cases of ocular vertigo in which we can exclude middle-ear disease, and they are almost always due to muscle imbalance. Unless you have a thorough knowledge of the mechanism of the eye muscles, you get no results with the prismatic exercises. I know that you can get better results from these exercises than from the wearing of prisms alone.

DISCUSSIONS OF PAPERS PREVIOUSLY PUBLISHED.**INCREASED RESISTANCE AN IMPORTANT FACTOR IN THE PREVENTION AND CURE OF TUBERCULOSIS.***

THOMAS H. A. STITES, M. D., HARRISBURG.

DR. S. W. S. DINSMORE, Sharpsburg.—I was very glad to hear what all realize, and what some of us are probably in a position to realize more fully than others, that this is a matter of the education of the people. The way to protect ourselves is to know how to take care of ourselves. Some years ago, when the State took this matter of quarantining up, we could not find, in our town of ten thousand people, with ten or twelve physicians, one doctor who was willing to take the position of Health Officer; for the reason that anyone filling such a position met black looks from everyone. The people were under the impression that to have a sign on their houses was something terrible, a disgrace to the whole family and all its connections. Some people took the signs down, and we had to have them arrested. I was the executive officer of the Bureau at that time, and we had a hard time to find a man to put up the signs and keep people from tearing them down again. Now they have become very tolerant to these signs.

I think that there is one thing that the State of Pennsylvania owes her children and should do. It should have printed literature in various languages,—not only in English, but the other most frequently used languages,—explaining to these people why these signs are used. Our English-speaking people are getting used to quarantine and other hygienic measures; but some of our little streets are occupied by Italians and Slavs, and they give the street commissioner constant work in order to keep the streets in a respectable condition, and our health officer constant work to keep the houses in proper condition. They are not so much to blame as we think. They are simply ignorant. If the State would co-operate a little more with us by giving us literature to distribute among these people, I think we would be able to show them the benefit of these measures to themselves, as well as to others. If we can show them that they are to receive the benefit, and not only their neighbors, for whom they do not care so much, it will relieve very much the burden of the health officers of the various communities.

I want to give you a little sample of our difficulty, and of

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how I tried to get the co-operation of the State and did not get it. Some years ago, in Sharpsburg, we had an epidemic of typhoid fever. There were some cases extending for a few squares in one direction, and a square or two in another. I set a man at work to investigate, and finally got the names of the families of all the patients in the city. I inquired where these people got their bread, butter, vegetables and milk, and found that these people, scattered throughout various portions of the town, all obtained their milk from one source—a milkman who used polluted ice. When we tried to shut off this ice supply, we got into a lawsuit. The man brought in figures showing what the ice was worth, and we did not feel like having him polluting the community with it; so we paid for the ice a fair price, and considered that we had got off mighty cheaply by doing that.

This is all a matter of education. Our English-speaking people are becoming more and more aware of the necessity for not only personal, but also domestic hygiene of all kinds; and the great effort in the future should be to take care of these people who come here from foreign countries and have no idea of the prevention of disease. I think that it is the duty of the State to give us literature to distribute among these people, and send inspectors around to go into their houses and tell them these things. That burden should fall on the State, and not on the individual person.

DR. J. M. HEIMBACH, Kane.—I do not purpose to discuss the paper at all, but I should like to ask a few questions of Dr. Stites. First, are there any statistics in reference to different nationalities on the tuberculosis question? It seems to me that some nationalities are particularly susceptible to tuberculosis. The Indians, when they contract this disease, have very little resisting power; yet they are people who live in the open air and have always lived that kind of life, and who should have resisting power, if anyone has it. Again, take the Irishman. I have heard someone say that this disease is the salvation of the Irish people, because a large number of them die of it. Their resisting power is not very strong. On the contrary, the Jew has all the resisting power; or much more, at least, than any other nationality. Yet compare the physique of the Jew with that of the Irishman. The latter is big and burly, while the former is all shrunk up and lives in an alley. Nevertheless, the Irishman may get the infection, and the Jew may not. There must, therefore, be something in the individual. That is, after all, the most vital point in the infection of tuberculosis. There is a personal equation that organic chemistry has been

unable to discover. Is there an excess of antibodies, or whatever you may call it? I do not know.

Another condition, you observe sometimes. Take a new community that has never been infected by tuberculosis, and let infection get into that community; and you will find that a large percentage of the inhabitants will die out at first, and many acquire miliary tuberculosis. This goes on until there seems to be a process of immunization that we cannot altogether explain. It might be something similar to smallpox. Is it not due to a process of immunization from generation to generation that we do not have the very virulent cases of smallpox that we did some years ago, before my time? Likewise, in these different colder communities you get a slower process of tuberculosis. The people get infected, but live on for a long time. Therefore, I think that there is something besides sanitation, besides cleanliness—however important these may be. We have to consider that there are people like that whom we see day after day in our practice. If Dr. Stites has any figures showing the relative percentages of deaths from tuberculosis among different nationalities, I should like to hear them.

DR. THOMAS H. A. STITES, Harrisburg, closing.—I made a note or two during the discussion, and I am glad to inform the gentleman from Sharpsburg that the State Health Department will be pleased to supply circulars printed in foreign languages. We have published them in six of the more important languages, and the information contained in them covers a considerable number of the communicable diseases—typhoid fever, diphtheria, smallpox, tuberculosis and several others. The Department will be very glad to receive requests for a supply of these circulars.

Dr. Dinsmore took up another question of considerable interest, viz.; the administration by the Commonwealth of local health affairs, in our cities and boroughs. In taking up that question, he is approaching that of the entire theory of government under our State Constitution. The State Health Department, through its Commissioner, has, at the various sessions of the Legislature, made attempts to secure action that will enable it to take the procedure that he seems to advocate; and universally the very thought of such an attempt has raised such a storm of protest in our cities and boroughs that the whole proposition has had to be abandoned. Therefore, Dr. Dixon has felt as we have a law that, in a good many respects, is excellent, he must do nothing that would endanger the future existence of that law.

The question of the disposal of sewage is of burning interest

to the western part of the State, and we are trying to accomplish something along that line.

With reference to the question of the gentleman from Kane as to the statistics concerning tuberculosis among people of different nationalities, I shall have to plead a poor memory for such things, when it comes to the exact figures. The subject, however, has interested me very much; and I have made a study of the statistics in our one hundred and fifteen dispensaries, with the result that the figures have shown that the proportion of the various nationalities and races among the people enrolled at these dispensaries is very close to the proportion of these same nationalities in our total population. That is as far as I can quote you; but I can assure you that it is true. I made the study with especial reference to the Negro and some foreign nationalities. The number of negroes enrolled in the dispensaries is practically in the same proportion as is their number in our population.

With reference to the resistance to tuberculosis displayed by various races, I would say that I recently read a paper by an Italian physician, who took up the point about our Hebrew brethren being less susceptible to this disease than other races. He advanced an ingenious theory, which I have not been able to follow out, that those races that have lived longest under the conditions under which they are living now have developed the greatest amount of resistance to these systemic diseases. He showed that the Indian and the Negro are living now under conditions entirely different from those under which their forefathers of only two or three generations back lived; and that they are very susceptible to tuberculosis and have but little resistance, the infection being usually fatal. On the other hand, the Hebrew, with his poor physique and bad surroundings, is still living under the conditions to which his race has been accustomed for centuries. I am simply stating this as an interesting theory of another man's. I thank you.

CONDITIONS OF THE UTERUS SUGGESTING MINOR SURGICAL TREATMENT.*

G. W. HARTMAN, M. D., HARRISBURG.

DR. J. M. HEIMBACH, Kane.—Dr. Hartman asked me to discuss his paper, and I must say that I admire it particularly for the absence of technicalities in it. It is simply a plain statement of facts; and I do believe that, if we all came to use

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the plain Biblical language to express our facts, we should get along much better.

I wish to make a few remarks regarding intra-uterine irrigation, and to suggest another preparation that I think Dr. Hartman has not mentioned, which is iodine in water. Last year I had a case that had been treated by one of those ultra-electrical doctors, who used all sorts of electrical treatments to cure her of a discharge that I doubt whether she had known where it really came from. She came back to me again before she was cured, although the electricity had toned her up and she had gained in weight. Later the discharge came back. Before going away, she had been too modest to consult a man physician. She preferred a lady physician. When she returned, she had gotten over this preference. Of course, I do not mean this as any reflection on the doctor at all. I made a thorough examination, and found that the discharge was coming from the uterine cavity. On slight irritation, I got a profuse discharge, almost like an abscess opening up; and I commenced to irrigate with hot iodine in water, using a very small irrigator; and I was astonished to find how quickly she responded. She was up in the sixties in age. This denuding of the endometrium for almost everything is, I think, a great mistake, and does much more harm than good. I never was one of that class of physicians who curette for almost everything that comes to their office. I do very few curettages, except for abortive cases in which there are probably retained placentas; but oftentimes there are catarrhal conditions in this region, just as in the nasal cavity—hypertrophies of the endometrium. You do not curette the nasal cavity for these conditions. You treat them with applications of iodine and glycerine. I have obtained good results from treating the endometrium in this way. It is surprising how these conditions clear up and the local discharges cease.

Regarding the cauterizing of the cervix, I believe that it is a good plan. I have never used this procedure, but it looks reasonable to me. The glands dip down into the cervix, and it is almost impossible to get any medicinal application to them. They often become cystic. Their mouths are comparatively small in proportion to the cavity back of them. I have obtained good results from the application of three parts of carbolic acid to one part of iodine, which is practically my substitute for the cauterizing plan. You get almost a similar result. Destroying the endometrium does give good drainage; and in all infective conditions of the uterine cavity and its appendages, the parametrium or the pelvic appendages, drainage is by all means the treatment, however one can accomplish it. You

have got to have drainage in infections. I do not care what the infection is—whether it is an abscess or not; you have to drain. This is nature's plan for curing these conditions. If nature is equal to the occasion, it brings the infection to the surface and gives free exit to the discharges; and the patient gets well. Then why not anticipate and assist nature? The more we anticipate nature and apply our art of healing, the better we get along.

DR. ANNA C. CLARK, Scranton.—This is certainly an interesting discussion. I wish merely to add a case in a child eight years old, who had contracted gonorrhoea from the use of the toilet in the public school that she attended. The infection was traced to its original source, they thought, and corrected; but this case had gone untreated for some time, and had produced an aggravated form of cystitis. I finally used the cystoscope, and found an ulcer just inside the lower third of the bladder. I touched it up with a strong solution of silver nitrate and irrigated with strong saline. The bladder had contracted to a capacity of three ounces, and the child was bothered with incontinence and had to be kept at home on her back. The infection cleared up with the use of argyrol in solution and irrigation, as indicated, at the office three times a week. The mother also used a douche of thuya, which I have found efficacious in such cases. The genital tract was inflamed.

Just a few days after I had succeeded in controlling the symptoms in this case, I had a violent case of gonorrheal vaginitis in a child. This was only two weeks ago. The child's eyes became infected. We traced the infection back to the father as the source. The mother had been sleeping with a smaller child, and the father with this larger one. The father had an acute infection. This case also cleared up. I could keep up the irrigation quite a while in this case. After the child had become accustomed to it, she found it very soothing. An oculist treated the eye disease. It seems to me that the violent disease in these children had it been allowed to continue must have given them trouble at puberty, and probably produced sterility.

DR. G. W. HARTMAN, Harrisburg.—This discussion recalls to my mind something that I saw in a medical journal somewhere. I cannot remember where I got the information, but it was that there is a world-wide impression among the laity that the disease may be cured by the touching or penetrating of a virgin. When I read this, it occurred to me that it might be the reason for the infection that we sometimes see in little girls. Three weeks ago, there was a case brought to the office of a vaginitis with a profuse yellow discharge. The child

was not more than eight or ten years old. I questioned the mother, in order to try to discover the source of the infection, because I believed it to be gonorrhea. I did not have a stain made to determine this point, however. I mention the case for what it is worth.

THE CARE OF THE PERINEUM DURING LABOR.*

E. A. KRUSEN, M. D., NORRISTOWN.

DR. JULIA C. LOOS, Harrisburg.—I am frequently reminded, in my practice, that the present-day attention to the perineum during labor is only about one quarter of a century old. On inquiring of patients and their friends concerning the previous history in troubles of this sort, I have invariably found that prior to twenty-five years ago there was not much attention paid to examining patients for repair of tears in the perineum. I recall that at the time when I was in college, twenty years ago, the subject was apparently rather new; and I have often felt very grateful indeed for the instruction then given me in regard to watching this particular point during labor.

We were instructed concerning the value of the use of grease externally. It has been suggested that grease on the tissues would prevent the natural excretion in the vagina; but if it is used externally, it certainly favors relaxation. One may thus dispose of perhaps half a cupful of olive oil during the course of the stretching of the perineum in the time necessary in order to give sufficient dilatation. A few years ago I had a case of rather slow labor, in which I had not expected a great deal of delay, but had expected complications; because the case had not been long under treatment, and the previous care of the patient would certainly have modified the dilatation of the tissues. I used the method of greasing the tissues and watching the patient, because the right occipital posterior position was very slow in producing delivery. It was so slow in this case that I sent for an assistant and asked her to bring her forceps, as I did not have mine with me. By greasing the perineum and keeping the pressure on the head as it advanced, I was able to save the perineum entirely in this instance. The head was rather large. The birth was practically finished by the time my assistant arrived. She got there just in time to see that there was no need for her. She expressed surprise on finding that there was no tear whatever. She had seen a great deal of obstetric work, and fully expected to find one. A few years later this patient became pregnant again in an-

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other city, and was then under the care of another physician. That delivery was instrumental; and the woman was, as her husband told me, literally butchered. The tears were quite bad, and her suffering was intense. The after-treatment required much care, and it left her in such a condition that her husband was much distressed. A third delivery of this same woman was as bad as the second. The doctor at the hospital who attended the woman on this occasion assured her that her obstetric condition was such that she would not be able to deliver herself of the child; yet she had had a child only five years before, and had delivered herself without any laceration. Of course, I attributed a good deal of this result to the homœopathic treatment beforehand.

I had a case recently in which I expected trouble, because the part was small, but delivery occurred six weeks earlier than was expected, and the child was small. In the course of a week, it was discovered that towards the anterior wall in the vagina there was a tear on each side. When the head had been delivered entirely outside of the bony pelvis it was still attached to the bone. That is, the external parts below the bone were so small and so tense or so protruded that when the head was actually delivered from the bony pelvis, it was yet encased in the skin covering it. I judged that it had been in the last effort at expulsion that the anterior lacerations had occurred. These tears required no sutures, as they were superficial and only about an inch in length. They healed without any trouble.

DR. J. M. HEIMBACH, Kane.—This matter of perineal laceration has occupied a good deal of thought on my part in an effort to determine how to account for its occurrence in some cases; and, as yet, I have not satisfied myself that I have discovered a reasonable explanation for some lacerations and for some cases in which one would expect a laceration to occur, but that are not lacerated.

So far as having complete lacerations, I would say that I recall only two cases of this in my experience. One was in a case of occipital posterior position of the fetus, which would not rotate; and the other was on account of the immense head of the child, which I could not deliver head first after four forceps applications. I found that I might as well have hooked the forceps into a tree and tried to pull the tree up by the roots. I finally produced version and delivered the body of the child as far as the waist line. By that time I was completely fagged out. I called on my anesthetist to take my place. With her pulling and my pushing with my fingers and thumb over the two crests of the ilium, we finally succeeded in delivering the

body. When this had been accomplished my assistant said to me, "You had better take your position again." She was worn out, although she was no small member of her sex, measuring six feet two in height, and being large in proportion. She had the muscular capacity of a good sized man, but she did not want to tackle the head. I, however, had the head in a somewhat more favorable position when I applied the forceps this time, and succeeded in delivering her. I do not believe that in such a case any amount of olive oil or stretching of the perineum with the fingers would have done any good. I sewed her up with partial success. She has pretty fair control of the sphincter; she formerly had entire control of it when she did not have any diarrhea. After this, she went out West and got that way again, with a torn perineum. The surgeon, who was a famous one in Utah, must, I think, have had a very hard time in delivering her; but, thank the Lord! the woman is still living and has a second husband. So she did not get discouraged.

The other case was an early one of occipital presentation with complete laceration. I fixed her up and got enough of the job; but the husband wanted to sue me because I had left a silk suture behind, which I had not detected at the time I took out the stitches. I opened the office door and told him that if he ever came back again I would get him out more rapidly. He did not sue me.

Thus it will be seen that we have cases of delivery in which we simply cannot account for the occurrence of even a minor laceration, because one would think that there was lots of room. I always give the patients all the time that is required; and if anyone can give me a satisfactory explanation for some forms of perineal lacerations, I should be glad to receive it.

POLLUTION OF RAILROAD TRACKS A MENACE TO PUBLIC HEALTH.*

ANNA C. CLARK, M. D., SCRANTON.

SURGEON W. C. STIMPSON, Public Health Service, Washington, D. C.—I think that Dr. Clark has given us an excellent paper, which covers the ground completely. Some of the statements that she makes contain facts entirely new to me. I did not know about the traffic's close relation to the spread of typhoid fever. That is a good reason why something should be done. The Government can do good only on trains running from one State to another, and it is probable that some regulation concerning them will be issued by the Secretary of

*This paper was published in the *HAHNEMANNIAN MONTHLY*, January, 1914.

the Treasury in the near future. The subject was discussed at the last two meetings of the representatives of the Public Health Service at Washington, but I do not know whether anything definite has been decided on. This sort of thing has to come around slowly. It has been only a few months since the Government required the railroads to abolish the common drinking cup and the common towel and demanded a certificate from the health officer at the place where they got their water. Just before I left Philadelphia, I asked Dr. Neff whether any of the railroads had obtained certificates from him. He replied that they had not, but had been bothering him to give certificates to them; but that he could not do so, because the water obtained at many places in Philadelphia was unfit to drink in the raw state. These facts bring up many questions, and we have to go a little slowly. The railroads form an immense corporation, and their interests are very large; so that a change in them cannot be made at once. Perhaps having got them to comply with the regulations concerning the common towel and drinking cup, we can in a short time get them to make the other changes desired.

The subject is very important. The typhoid bacillus lives long in moist earth, although not long in water. In the latter it will die in a week or a month; but it will live a long time in moist earth. A man that I know of went to Plymouth, Pennsylvania, and contracted typhoid fever in January; and the following March that city had an epidemic of typhoid. The bacilli from the first case had remained frozen until spring, and had then got into the water, and one tenth of all those that contracted the disease died. This shows that even a single bacillus carried on a roadbed may infect the whole water supply of a town. It has been stated that one person out of every thousand is a bacillus carrier. That would make three hundred bacillus carriers in Washington alone. Many persons suffering with typhoid travel. A person who is taken sick away from home always wants to go home, and such persons are apt to distribute these bacteria. Dr. Clark showed me the plans that she has there. I think that the one that she has herself devised seems very efficient, and I will do what I can to get it adopted.

DR. THOMAS H. A. STITES, Medical Inspector of the Dispensaries of Pennsylvania, Harrisburg.—I am afraid that I cannot add much, beyond saying that the information has reached me (I do not know through what channel, but probably through conversation in our office at Harrisburg) that the Pennsylvania Railroad, which is the road of the greatest interest to those in this State, is very seriously considering the

problem of sewage disposal, and is ready and willing to take steps in this direction as soon as it can find some device that is practical and practicable. The railroad companies come in for a good deal of condemnation that is, as Dr. Stimpson says, possibly a little unjust. They are enormous organizations, and it is impossible for them to move quickly. At the same time, as Dr. Clark remarks, they are like the rest of us, and do not care to spend money until it is absolutely necessary.

DR. J. M. HEIMBACH, Kane.—When Dr. Clark spoke of tanks, I was thinking of a gentleman in Bradford who has invented a kind of private toilet intended particularly for rural districts. He uses a chemical (I have forgotten what it is) that he puts up in his private home. This toilet is practically similar to any flush toilet. The excreta go into a tank containing chemicals, and they are stirred up together. He claims that there is absolute destruction of the excreta. I think that some simple device like that would be a good thing on a railroad, which could arrange for the disposal of its sewage in that way. Removable tanks could be used, which could be emptied at intervals.

As far as the track is concerned, I think that there is a great opportunity for flies to carry the infection of typhoid fever from railroad tracks to nearby houses. The flies are always busy, and not very polite. They get on food, which is taken into the alimentary canal; and typhoid results. I was surprised, as I came down through Altoona, where I stopped and visited the hospital, to have one of the internes, a former student of my own, who showed me through the hospital, tell me that they had one hundred and fifty-four cases of typhoid fever there. On one floor there were nothing but typhoid cases; and they had had to put some of these cases on the floor below, also. I asked him whether they knew the source of the infection in these cases, and he said that they did not; but that they had notified the Board of Health authorities, who were then making an investigation. Why so many typhoid cases should be in Altoona at present, I do not know; but there is no doubt that a good many cases of typhoid fever originate from sources on the railroad track, such as flies and dust, and people wonder where they come from. I have such a case at home at present. I could not begin to trace the source of it. The patient lives about ten miles from town, and is a girl twelve years old. She is not very sick, but has a rise and fall of temperature morning and evening. I have no doubt that it is a case of typhoid. I did not make the Widal test, but there are all the clinical evidences. The diagnosis seems so clear that I do not feel justified in making the Widal test.

DR. ANNA C. CLARK, Scranton, closing the discussion.—I am very much obliged to you for your courtesy in listening to this paper. We will keep on working until we find something that will be feasible for the railroads to adopt and that they will be willing to employ. The removable tank can easily be taken off. In the Detroit station there were seven hundred cars at one time; and it was found that the change on all these could be made in three minutes. Therefore, the consumption of time does not count. It requires no extra number of employes to perform this work, those employed at present being quite sufficient to attend to it.

Of course, the reform must come slowly, because we have been slow in thinking of it ourselves. The plans for the construction of the cars must be worked out slowly; but it really would be gratifying if we could see some definite indication that the railroads are learning. The Delaware, Lackawanna and Western Railroad has arranged a little device at our station, whereby the Pullman sleeper is connected with the sewer while standing in the station for several hours. This takes care of the actual sewage. The connection is very poor with the sewer, and the odor at that end of the station is decidedly offensive. The connecting tank is evidently never cleaned. I am willing that this device should stay there; because after a while there will be trouble from it, and Dr. Dixon will get after them. Then they will have to do something different, even if our Board of Health does not take the matter up.

INSUFFICIENCY OF THE ADRENALS IN PERNICIOUS VOMITING OF PREGNANCY.—Sergent and Lian (France) believe that in some cases of pernicious vomiting of pregnancy, there is an insufficiency of the adrenals, which is due to syncytial intoxication. The authors report six such cases which were relieved by adrenalin after the failure of other treatment. They recommend, therefore, that before premature delivery is induced that the patient be treated with this preparation. The symptoms which call for the use of adrenalin are great prostration, lumbo-abdominal pains and deficient arterial tension.—*Abstr. Zentralbl. f. Gyn.*, 1913—479.

REPORT OF SOME RECENT TRANSACTIONS OF THE BUREAU OF MEDICAL EDUCATION AND LICENSURE OF THE STATE OF PENNSYLVANIA.

DRUGLESS THERAPY.

Your committee reports in pursuance of your instructions that it has looked into the personality and qualifications of five men practicing various systems of drugless healing, and after having satisfied itself of the general character and fitness of these men have had them submit credentials as to their preliminary and professional education, as well as to their moral and professional character. Having passed on these credentials, we have in accordance with your instructions, submitted these men to an examination, part oral and part written, as to their knowledge of the subjects they profess. Having found them fitted we have voted them a license to practice Drugless Therapy in the Commonwealth of Pennsylvania. This being accomplished, the licensees have been requested to organize themselves in a committee, and to elect their own officers with the object of rendering themselves available to enter into consultation with this Bureau and its committees, in furtherance of the object of organizing a system of licensure in this Commonwealth for men and women wishing to practice Drugless Therapy and of establishing the same.

It is recommended that these licensees be appointed as an Advisory Committee to serve for the period of one year from January 1, 1914.

The men so chosen and licensed are:

Henry C. Garbisch, Washington, Pa.

Alfred J. Atkinson, Pittsburg, Pa.

William M. White, Pittsburg, Pa.

Aubrey W. Marchand, Philadelphia, Pa.

LaForest Potter, Philadelphia, Pa.

Having formed themselves into a committee, they have elected the following officers:

Chairman, Aubrey W. Marchand, Philadelphia.

Secretary, William M. White, Pittsburg, Pa.

Your committee asks for your endorsement of its action as indicated in the foregoing.

After full consideration and consultation with this commit-

tee, we recommend to the Bureau that the following system of licensure of men practicing various methods of drugless healing be organized and be at once put into force in the Commonwealth of Pennsylvania, as provided for in the Medical Act of 1911 and amended in 1913, to-wit:

That applications for license be received up to and including May 1, 1914, by application to the Bureau of Medical Education and Licensure, Dr. Nathan C. Schaeffer, Harrisburg, Pa.

That the term "*Drugless Therapy*" be adopted as the name under which to organize licensure for this class of persons.

That *Drugless Therapy* be defined to be that branch of medicine which directly or indirectly applies any available means or method other than drugs or surgery for the prevention, alleviation and treatment of disease.

That the Bureau further define the meaning of the term "*Drugless Therapy*" so that it officially and herewith be understood to include the following divisions and subdivisions:

1. Any treatment having the spine for a base.
 - (a) Chiropractic.
 - (b) Napravit.
 - (c) Spondylo Therapy.
 - (d) Chiropractic Spondylo Therapy.
 - (e) Neuropathy.
 - (f) Any other treatment having the spine for a base.
2. Any treatment having water, air, heat, sun, light, earth for a base.
 - (a) Hydro-therapy.
 - (b) Kneipp System.
 - (c) Priessnitz System.
 - (d) Just System.
 - (e) Helio-Therapy.
 - (f) Thermo-Therapy.
 - (g) Any other treatment not here specified, but having water, air, heat, sun, light, earth for a base.
3. Any treatment having electricity for a base.
 - (a) Electro-Therapy.
 - (b) Electric Robe Baths.
 - (c) Electro-Massage.
 - (d) Electric Light Baths.
 - (e) Any other treatment having electricity for a base.
4. Any treatment having food or herbs for a base.
 - (a) All prepared foods.

- (b) Selected foods.
 - (c) Teas.
 - (d) Herb Treatments.
 - (e) Tropho-Therapy.
 - (f) Food Chemistry.
 - (g) Phyto-Therapy.
 - (h) Any other treatment having food or herbs for a base.
5. Any treatment having any Manual, Physical, Mechanical exercise, apparatus, appliances, adjustments or treatments for a base.
- (a) Mechano-Therapy.
 - (b) Swedish Movements.
 - (c) Massage.
 - (d) Scientific Massage.
 - (e) Vibro Massage.
 - (f) Medical Gymnastics.
 - (g) Physical Culture.
 - (h) Neurology.
 - (i) Oxypathy or Oxydonor.
 - (j) Magnetic healing.
 - (k) Any other manual, physical, mechanical method of exercise, apparatus, appliances or treatments not here specified.
6. Any treatment having the mind for a base.
- (a) Suggestive Therapeutics.
 - (b) Metaphysics.
 - (c) Vita-Therapy.
 - (d) Any other treatment having the mind for a base.
7. Any system, method, science or art of treatment which is in or may come into existence and not already specified under the above named six divisions of Drugless Therapy.

That, with the exception of those otherwise provided for by law, any person engaged in practicing any branch of Drugless Therapy, as above described, continuously since on or before July 25, 1913, in any one county of the Commonwealth of Pennsylvania who can present satisfactory evidence of good moral and professional character as well as satisfactory evidence of a resident course of not less than one college year in a reputable school or college teaching the branch of Drugless Therapy which he or she is engaged in practicing shall upon application to the secretary of the Bureau of Medical Educa-

tion and Licensure, be entitled to an examination before a committee appointed by said Bureau. And upon said person satisfying this committee of his or her ability to properly practice the said branch of Drugless Therapy, it shall be the duty of said committee to recommend such persons to the Bureau of Medical Education and Licensure as entitled to a license under provisions of the Act of July 25th, 1913.

Further, that any person who has been practicing any branch of Drugless Therapy continuously in one or the same county of the Commonwealth of Pennsylvania for a period of three years or more previous to February 1st, 1914, and can furnish satisfactory evidence of this fact, as well as satisfactory evidence of education and good moral and professional character, in the particular branch he or she is now engaged in practicing, may be licensed forthwith.

And further, that any person practicing any form of Drugless Therapy in the Commonwealth of Pennsylvania at the present time who cannot furnish evidence as required above shall upon application to the secretary of the Bureau of Medical Education and Licensure be granted the privilege of taking an examination to prove his or her fitness before the committee appointed by said Bureau, and upon passing the same satisfactorily shall be recommended to the Bureau for final action and licensure.

That such examination shall be in writing and shall consist of questions on the subjects of Anatomy, Physiology, Pathology, Symptomatology, Diagnosis, Hygiene and in the particular branch of Drugless Therapy which he or she is engaged in practicing; and all candidates must attain a general average of not less than seventy-five (75) per cent. nor fall below a grade of fifty-five (55) per cent. on any one subject.

This initial examination is final and no re-examination will be granted unless the applicant qualifies under the educational requirements embodied in the Act.

And provided further, that such license when granted will entitle the licensee to the privilege of practicing only such branches as are included in the term "*Drugless Therapy*" as defined in the minutes of the Bureau. The words "*Drugless Therapy*" shall be written plainly across the face of such license, which license shall have the standing as prescribed in *the Medical Act* of July 25, 1913. In no way shall the license entitle the licensee to practice surgery, obstetrics, the admin-

istration of drugs in any manner, nor to treat quarantinable diseases.

That thereafter no person be admitted into the Commonwealth of Pennsylvania for the purpose of practicing any form of Drugless Therapy except she or he conform to the following requirements:

First. A preliminary education prior to entering upon the study of Drugless Therapy equal to in all respects that required of medical students entering upon the study of medicine; these requirements to be passed upon by the Bureau of Professional Education of the Department of Public Instruction of the Commonwealth of Pennsylvania.

Second. A course of study satisfactorily completed consisting of the following:

A. The first two years of study prescribed by any of the medical schools of this Commonwealth excepting those portions relating to *Materia Medica*, *Pharmacy*, *Pharmacology*, *Toxicology*, and *Surgery*, or its equivalent as acceptable to this Bureau.

B. A third year of study to include *Hygiene* and *Preventive Medicine*, *Symptomatology*, *Diagnosis*, *Pathology*, and *Therapeutics* relating to Drugless Therapy.

C. The satisfactory passing of a licensing examination conducted by the Bureau of Medical Education and Licensure of the Commonwealth of Pennsylvania after having qualified on the requirements of A and B, as well as upon character and moral standing.

The committee further recommends that steps be at once taken to establish such a system as is herewith recommended.

Respectfully submitted,

D. P. MADDUX,
ADOLPH KOENIG,
J. M. BALDY.

CHIROPODY.

On February 13, 1914, the Bureau of Medical Education and Licensure adopted the following plan for licensing persons who desire to practice Chiropraxy in the State of Pennsylvania:

Any person of good moral character who has practiced Chiropraxy continuously for a period of three years and can

establish these facts to the satisfaction of the Bureau of Medical Education and Licensure shall be licensed forthwith.

All other persons now practicing Chiropody in Pennsylvania shall be required to pass an examination to test their qualifications for the practice of Chiropody. Applications will be received up to and including May 1, 1914.

After May 1, 1914, applicants for license to practice Chiropody in Pennsylvania must fulfil the following requirements:

A. A preliminary education of a four-year high school course to be passed upon by the Bureau of Professional Education of the Commonwealth of Pennsylvania.

B. A course of study in Chiropody in a school recognized as competent by the Bureau of Medical Education and Licensure of the Commonwealth of Pennsylvania.

C. The passage of a satisfactory examination established by the said Bureau of Medical Education and Licensure for the purpose of testing the fitness of the person applying for licensure. Admittance to this examination to be subject to satisfactory compliance with the requirements of A and B as well as satisfactory proof of character and moral standing.

A committee of experts was selected to assist in testing the qualifications of applicants.

The licensing fee is twenty-five dollars.

COMMUNICATIONS TO THE BUREAU.

DEPARTMENT OF PUBLIC INSTRUCTION.

HARRISBURG, PA., February 19, 1914.

DEAR SIR:

At a meeting of the Bureau of Medical Education and Licensure on February 11th, it was resolved that the Bennett Medical College of Loyola University of Chicago be stricken from the list of medical colleges recognized by the Bureau of Medical Education and Licensure, and that this fact be published in the medical journals.

I also enclose the reports of the Committees on Drugless Therapy and on Chiropody which were adopted as the plan for licensing practitioners in these several lines.

I submit the above information for such use as you see fit to make of it.

Yours very truly,

NATHAN C. SCHAEFFER,

Secretary, Bureau Medical Education and Licensure.

DEPARTMENT OF PUBLIC INSTRUCTION.

HARRISBURG, PA., February 19, 1914.

DEAR SIR:

At a meeting of the Bureau of Medical Education and Licensure, held February 11th, the secretary was instructed to call the attention of the medical schools of Pennsylvania to Section 5 of the Act of Assembly, 1911, as amended in 1913, which says: That applicants for licensure must have "had a general education of not less than a standard four-year high school course, or its equivalent, and not less than one year of college credits in chemistry, biology and physics, *all of which have been received before admission to medical study,*" and that applicants for admission to the first year of the medical course must have from the Bureau of Professional Education a certificate specifying that he or she has met these requirements of preliminary education.

Yours very truly,

NATHAN C. SCHAEFFER,
Secretary, Bureau Medical Education and Licensure.

DEPARTMENT OF PUBLIC INSTRUCTION.

HARRISBURG, PA., February 19, 1914.

DEAR SIR:

The Bureau of Medical Education and Licensure of the State of Pennsylvania, at its recent meeting, resolved, in accordance with our law, that in the future the Bureau will accept all those entering Pennsylvania on a reciprocity basis who have graduated after January 1, 1914, a year of internship in an approved hospital for a license on the basis of reciprocity, but that those who graduated before January 1, 1914, will be accepted on the regulations enforced at that date.

The above is respectfully submitted for the information of your Board.

Yours very truly,

NATHAN C. SCHAEFFER,
Secretary, Bureau Medical Education and Licensure.

EDITORIAL

HAHNEMANN AND HIS PERSONALITY.

THERE are two phases in the life-story of every great name in history. One makes its appeal in a purely non-personal way, whilst the other is more or less entirely personal in scope and character. The first phase has to do with the chronicling of those attainments which have not only set our great one apart from his fellows but have lifted him up as well—to greatness and to universal esteem. The second phase has to do with that mysterious and eerie “something” which hovers about every man—his distinctive personality. Now, as far as the recording of attainments in themselves go, and in our single domain, that of the art of healing the sick, there is no name so fair and none whose imperious sway is more sovereign in the field of curative usefulness than that of the German Hofrath—Samuel Christian Frederick Hahnemann. With him, to know the spirit and character as well as extent of his medical iconoclasm was in very large measure to know the man himself. Kipling tells us, in one of those inimitable sketches of his, bearing upon every day army life in India that—

“There is an army that’s never been listed,
Which owns no color nor crest,
But broke in a thousand detachments,
Is leading *the road for the rest.*”

Now, of all the leaders in the art of healing, and in the truest sense of pioneer in this field, none is so distinctively prominent as Hahnemann himself. His distrust of polypharmacy, out of which the use of the single remedy insensibly grew, his peculiar care for things hygienic (a vast need neglected in his day), the original and truthful concept that the totality of symptoms *per se* are the mirrored replica of the illy functioning state of the disease itself, his law of similia in relation to cure, his minimal dose, his doctrine of dynamized drugs and of vital force—these, in fact, and much more besides are his remarkable con-

tributions of a permanent character to the practice of medicine. Quite apart, however, from these considerations which reveal our indebtedness to him, as residuary legatees of a simple and practically useful healing art is a knowledge of the man himself, as disclosed by the testimony of many who knew, and of one who loved him.

Samuel Hahnemann was born on the 10th of April, 1755, at Meissen in the Electorate of Saxony. It was and still remains one of the most beautiful parts of Germany. This circumstance, alone, as he grew up to manhood, doubtless contributed a great deal to his veneration for the beauties of nature. At an early age, as he himself relates, his father and mother taught him to read and write—as a pastime only however. Among Hahnemann's papers left to posterity is one, dated in August, 1791, in which he gives us an inkling of his father. He says in substance: "My father, Christian Gottfried Hahnemann, who died four years ago, was a painter in the porcelain manufacture, and had written a little work on that art. He had the soundest ideas on what was to be reckoned good and worthy in man, and had arrived at them by his own independent thought. He sought to implant them in me, and impressed on me, more by action than words, the great lesson of life, 'to act and to be, not merely to seem.'"

Numerous anecdotes of the youth of most great men are on record, which would really afford us but skimp interest did we not know that "the boy is father to the man" and that the mental bent or bias displayed in youth is often carried out in later years. Washington had his axe and cherry tree; Bonaparte had his youthful snow-balling, and as the following shows the inherent thirst for knowledge which prevailed in the mind of Hahnemann, we record it. His parents were very poor, and his father, objecting to the extravagant quantity of oil consumed by his son's nightly studies, deprived him of the family lamp, except at stated hours. The youth, however, by exercising his ingenuity, contrived to make a lamp out of clay; and then persuaded his indulgent mother to supply him with oil out of her stores. This determination to overcome obstacles clung to him as a characteristic trait all through his lifetime. He passed several years about this time at the Stadtschule and at the age of sixteen began to attend the Fürstenschule of Meissen. Magister Müller, at that time the rector, dearly loved the boy and permitted him to forego certain sun-

dry tasks because of his delicacy of constitution. Despite this, the youthful Hahnemann was a great favorite among the classmates. In due time came the university, and having gotten his father's permission, he set out for Leipzig at Easter in 1775 with twenty crowns in his purse. This was the last money ever received from his parent. Of this money, he was robbed of the greater portion, and thus deprived, he was forced to support himself at the university by giving lessons and making translations into the German. Hahnemann spent two years at the university, and besides the daily lectures, he sat up alternate nights in his translating. Despite such a tax on his vital powers, he managed by these habits of self-sacrifice to save sufficient money to take him to Vienna, where he studied under Dr. Quarin and practiced in the hospitals for two years. In 1784 he went to Dresden, where he lived for four years. At this place he wrote eighteen treatises, the most remarkable being about a new salt of mercury which now bears his name.

We next find him in Leipzig, in 1789, ten years after taking his degree. Whilst there he assiduously worked on the study of medicine, chemistry, mineralogy and other closely allied sciences. At this time he did much translating from foreign languages. By these hard labors he acquired a European reputation among the savants of the Old World. He was very much dissatisfied, however, with the practice of medicine and realizing the horribly chaotic character of practice, he gave over prescribing for the sick because he dared not scruple to practice any art based on pure guess-work and empiricism. When we realize, nowadays, the inane polypharmacy of this lamentable era, especially when the same was allied to a very massive medication in conjunction with a wholesale blood-letting, we cannot be unaffected by the great German's mistrust of the then prevailing practice. Although thoroughly dissatisfied with this existing state of affairs, he seems, even at this time to have been inspired by some innate conception of the future. His attention was drawn to the fact that cinchona or Peruvian bark—a well known remedy in intermittents—when taken by persons in sound health produced a disorder very similar to that disease. Out of this sedulous observation *homœopathy* took its birth. In 1805, he published a small brochure on "The Positive Effects of Medicine," i. e., the effects produced by drugs on a healthy body. From this short monograph, the

modern scientific investigation of drug pathogenesis was firmly brought into existence. The work was written at Torgau.

In 1831, the cholera raged with fearful violence in Eastern Europe. The advent of this dread disease seemed to restore Hahnemann to the freshness and vigor of life of a young man. It was with wonderful acuteness that he described the symptoms and phenomena of this disease. His marvelous knowledge of the effects of drugs on the human body enabled him to determine according to the homœopathic principle those that would be of service in this terrible scourge. This is the more remarkable, as at this time he had never had an opportunity of personally examining any actual cases. In this he recommends *camphor* as the principal remedy, but says it must be used in the first stage and as a household remedy before there is time to summon a physician and while waiting his arrival. He says: "In the first stage, accordingly, the patient must get as often as possible (at least every five minutes) a drop of camphor (made with one ounce of camphor to twelve of alcohol) on a lump of sugar or in a spoonful of water. Some spirit of camphor must be taken in the hollow of the hand and rubbed into the skin of the arms, legs and chest of the patient: he must also get a clyster of half a pint of warm water mingled with two full teaspoonfuls of spirit of camphor, and from time to time some camphor may be allowed to evaporate on a hot iron so that if the mouth should be closed by trismus, and he can swallow nothing, he may draw in enough of camphor with the breath." Hahnemann accurately realized that a palliative action must be at once produced or the patient will die before the homœopathic medicine has time to act. Of 161 cases of cholera at Daka the experiment of curing the disease with spirits of camphor as recommended by Dr. Hahnemann was tried and only fourteen died; namely, eight who solicited assistance in the last stage of the disease, and seven who, by improper living after three or four relapses, could not be saved. This statement can be proved by more than seventy sworn witnesses. Dr. Bakody, a homœopathic practitioner of Raab, in Hungary, was much more successful than his allopathic confreres. Of 1,501 cases treated allopathically 640 died. Dr. Bakody treated 154 cases of real cholera and lost but six cases. Dr. Rubini in the epidemic of Naples of 1854-1855 had 354 cases, quite a few of which were of the Third Swiss Regiment. He did not lose a single case.

Hahnemann later resided fifteen years at Coethen, under the protection of the Duke d'Anhalt Coethen, pursuing one of the most brilliant careers on record. He labored like a Titan, perfecting his system by experiments on himself and upon his friends. Many of these experiments entailed extreme suffering. Not only did he enjoy the highest reputation at home but the fame of his marvelous cures spread itself throughout all Europe which accounted for the thousands of strangers of the highest rank coming to him for advice and treatment. Later on, and at the suggestion of his second wife, he practiced with marvelous success in Paris.

At this time records, of an interesting character have been left regarding his personal appearance. He was a man of small stature and of correct feature, with an uncommon air of penetrating observation and self-possessed composure—a Venetian-like presence worthy to pair with any of those “most potent, grave and reverent signors” which have come down to us through the brush of skilled artists. The following personal description of him at this time has been left us: “At this period he was eighty-four years of age, of a slender and diminutive form. His head was large and beautifully proportioned; his forehead broad and massive, set off by a few silvery locks; his eyes deep set, dark, piercing, and animated, and his whole countenance indicative of the highest order of genius. He constantly smoked a long pipe with a painted bowl even during his hours of reception. He read and wrote without the use of spectacles; his handwriting was firm and delicate—almost equal to copper-plate—and his activity and animation still exhibited some of the traces of youth.” Hahnemann continued to reside in Paris till his death in 1844. Shortly before his death, his wife, by way of imparting some comfort to the invalid, whispered: “Surely some mitigation of suffering is due to you, who have alleviated the sufferings of so many.” To this he replied: “Every man on earth works as God gives him strength, and meets from man a corresponding reward; but no man has a claim at the Judgment Seat of God. God owes me nothing. I owe him much—yea, all.” With these beautiful words he departed and there was missing from the earth one of its noblest characters. DONALD MACFARLAN.

*In the near future a splendid and exhaustive life of Dr. Hahnemann is to appear; the same being the contribution of Dr. Richard Haehl, of Stuttgart, Germany. At this time interest in the great German is also aroused by the recent issuing through the Everman Library of an edition of the *Organon*. The latter is from the pen of Dr. Charles E. Wheeler, of London.

THE LICENSING OF DRUGLESS HEALERS.

THE average medical man has but little conception of the difficulties that must be met and overcome in solving the problem of the "drugless healer." The basic principle behind all laws governing persons who hold themselves out to the public as practitioners of medicine—by which term we mean, of course, the management of disease in all its aspects—is, that the state has the right to protect the public against the disastrous effects that are likely to result from incompetent and uninformed persons assuming such a function.

As we are all aware, the law, in the past, in this State and in most other States has been nothing more than a grim joke. Whatever virtue there may have been in the original law was quickly despoiled by the courts when, after long and learned discussion, they decided that the "practice of medicine" consisted in giving pills, powders or potions. A knowledge of the nature and course of various diseased conditions, the ability to recognize one type of disease from another, the ability to institute proper hygienic, sanitary, mechanical, psychic or other methods of treatment were passed over as matters of no consequence.

The result of this decision has been that any barber, hospital orderly or boot-black who got tired of his job and who wanted to be called "Doc," could, for a few dollars, take a course by mail and, marvellous to relate, would spring forth after a few weeks a full fledged "doctor" of one of the fifty-seven varieties of "pathies" from which he had to choose, ready to handle people afflicted with disease of any and all sorts, in a manner which, the public were boldly assured and credulously believed, to be infinitely superior to that in vogue among the legally recognized practitioners of medicine.

Such tyros are safe from any legal prosecution as long as they avoided the use of drugs and, for practical purposes enjoyed all the privileges of physicians except the right to sign death certificates, which particular prerogative they naively confess is entirely superfluous when *their* system of treatment is employed.

Only the conscientious young man who has made an effort to acquire a knowledge of the human body in its normal and abnormal states and of the methods of application, and com-

parative results of the various methods of therapy that have been evolved by human experience, meets with opposition at the hands of the law. Such a man must pay a fee of twenty-five dollars and submit to a most searching examination before he is permitted to do what the State commonly allows the ignorant and the inexperienced to carry out without hindrance.

As unsatisfactory and as unjust as such a state of affairs must be admitted to be, it is exceedingly difficult to change.

It is true that the new medical act in Pennsylvania places within the hands of the Board of Medical Education and Licensure, such powers as would enable them to prosecute any non-licensed person publicly practising upon the sick for pay, no matter whether they employ drugs or not; but it is exceedingly doubtful whether public opinion would support a strict enforcement of this law.

Despite all of our self-laudation and congratulation upon the high state of civilization and intelligence to which we, as a state, have attained, the plain simple facts are, that superstition and childish credulity are about as prevalent as they ever were, and many intelligent, well-meaning and useful citizens in this Commonwealth, look with mingled feelings of gratitude and reverence upon some of the oily charlatans whose dupes they have been and would resent most sincerely and indignantly any effort on the part of the law to curtail the privilege of their "beloved healer."

Any practical solution of the problem, therefore, must be undertaken with a certain spirit of tolerance and with a large amount of patience. It will require two or three years of education and of intelligent study of the problem on the part of the Board of Medical Education and Licensure to work the matter out in such a way that no injustice shall be done to the competent and conscientious practitioners of these various cults and at the same time eliminate the incompetent and unscrupulous.

We desire to commend to our readers a careful perusal and consideration of the report of this subject recently submitted to the Board of Medical Education and Licensure. It will require work and time to carry out plans they have laid down; but we believe, on the whole, that they represent the most practical and rational method of dealing with the problem that has yet been brought before our attention.

G. H. W.

GLEANINGS

THE CLINICAL USE OF INTERNAL SECRETIONS.—Wm. N. Berkeley, of New York, gives an excellent summary of our present knowledge of the clinical use of the internal secretions in a recent issue of the *Medical Monthly Cyclopedic and Medical Bulletin*. On account of the wide-spread interest on the part of the "profession" in the internal secretions, we are glad to present the views of a man of such wide-spread experience and conservative judgment as Dr. Berkeley.

Thyroid medication has not received the attention it merits in the treatment of thyroid enlargement in young girls just past puberty. In these patients a parenchymatous enlargement often develops by reason of the great metabolic demand upon the resources of the thyroid during rapid growth. Small doses of thyroid gland twice a day in such cases have a remarkable effect in reducing the struma to normal size. Thyroid gland, on the other hand, is strongly contraindicated in Graves's disease. In pathologic obesity, the behavior of thyroid is extremely uncertain. The use of thyroid has been recommended in the case of children who are beginning to suffer from adenoids. In early cases and in doses carefully adjusted to each case it appears to make good, but after the condition has progressed to the point of mouth-breathing, resort should be had to the surgeon. One should be sure to get a reliable preparation of the gland. The market is full of uncertain and dangerous makes, which are neither standardized nor fresh.

Parathyroid.—In paralysis agitans parathyroid treatment has latterly become almost coextensive with medical knowledge of the disease itself, and the results have been increasingly favorable. Of the patients who have used a preparation made after the author's formula about 80 per cent have been benefited, and 60 per cent have been greatly and permanently improved. In any real case of tetany—postoperative, infantile, gastric, or other—parathyroid is a rational and helpful remedy. It should not be expected to have any effect in organic nervous disease where the characteristic spastic position of the fingers and toes is temporary and accidental.

Testis.—This is a valuable remedy after surgical removal of the testes, in double tuberculous orchitis, in atrophy of the testes, in functional impotence, and in certain cases of excessive obesity in elderly men developing after their sexual powers have failed. There are some cases of arrested development in large boys where testis supplies a chemical deficiency in the organism. When boys of 18 or 20 years, of fair mentality, have a childish voice, no pubic hair, and no sexual desire nor erectile power, testis is indicated and often gives a very fair measure

of success. The use of this remedy should be much more extensive than is now the case.

Pituitary.—The posterior part of the pituitary is made up of nerve tissue and has no concern for us, but the pars anterior and pars intermedia are both secretory. In the author's opinion the popular commercial extracts of pituitary, derived from the raw gland by high degrees of heat and the use of strong acids, do not represent the real gland. Such extracts may perhaps have the clinical effects claimed for them, but it is highly unlikely that the normal pituitary secretes any such substances in its normal state. As the author has not satisfied himself as to the differences between the fore- and mid- gland, he usually prescribes the entire gland. This he finds to be of specific value in arrested physical growth when this condition is encountered without complications. The value of the remedy was first impressed upon him by the case of a boy of 17 years who had the voice and nature of a child of 9. The boy was well advanced in his classes, intelligent, a monitor at school, and of gracious and pleasing manners, but was in despair because of his size. Since he began taking pituitary "entire," he has slowly begun to grow, and is now some $3\frac{3}{4}$ inches taller than a year ago, with a stronger voice, a fresh growth of pubic hair, and a little down on his upper lip. He has never felt so active and well as since he began the remedy. Several other cases have behaved in the same way. Theoretically one could produce acromegaly by giving pituitary for an indefinite period, but this patient is so far growing normally.

In the curious and rare condition of excessive obesity and genital atrophy (*hypopituitarism*) described by Harvey Cushing and others, pituitary gland (*pars anterior*) is indicated specifically. There seems ground to think that pituitary is also indicated in osteomalacia, in defective ossification generally, and in ununited fractures. It is certainly contraindicated in acromegaly.

Thymus.—Clinically, there can no longer be much question that, when properly prepared, thymus is of the greatest value in many cases of arthritis deformans. The author knows of a dozen or more recent cases where the good effect has been gradual but permanent. Pain and swelling (*not* the bony deformities) have disappeared, and the patient recovered his appetite and courage and returned to work. The nucleoproteid extract is very much better for these cases than the crude gland. A course of treatment should cover several months, and small doses should be continued for some time after apparent clinical cure.

Ovary.—The author uses only corpus luteum, as it seems quite certain this is the only part of the ovary that secretes internally. He gives it in the toxemias of pregnancy, in excessive obesity in women after the climacteric, in the nervous disturbances appearing with the approach of the climacteric, and after total excision of the ovaries. In treating early and mild cases of Graves's disease in virgins, he likes to begin with corpus luteum. Abundant experience has shown it to be a useful antidote to thyroid toxins circulating in excess in the blood.

When menstruation is painful and deficient in young wives who have been curetted properly and still fail to conceive, giving corpus luteum may assist in the conversion of the uterine mucosa into a normal decidua.

Such a procedure may cure a certain percentage of the cases of female sterility; it is certainly worthy of a fair tryout.

Mammary Gland.—The administration of mammary gland will certainly correct many menstrual irregularities of various kinds—flooding, amenorrhea, pain. Tumors of the ovary, probably simple cysts, sometimes disappear under the action of mammary gland.

Adrenals.—The numerous commercial adrenal “extracts,” useful as they are in many ways, should rather be called derivatives of the adrenal gland. They are prepared by chemical methods which must certainly destroy the sensitive proteids of the fresh gland. It is very improbable that a single one of them exists as such in the organism. To get the real physiologic effect of the suprarenal gland, either the entire gland must be given or the nucleoproteid or globulin extract. If this plan had been followed in the past, the author has no doubt that the lives of many sufferers from Addison’s disease might have been saved.

Adrenal gland given for a few weeks has a curious stimulant effect upon the sympathetic. The pupils may become unequal from stimulation of the dilator fibers, the light reflex disappear, and the patient may fear—or his doctor for him—that locomotor ataxia is developing. It is possibly this effect that makes the gland of value in certain cases of paroxysmal vomiting of a chronically recurrent character where no organic disease of the stomach can be discovered. A certain neurologist believes adrenal to be of the greatest value in certain cases of idiopathic epilepsy, and has reported some recent cases in which there seems no doubt that the drug was of marked efficiency.

Pineal Gland.—The pineal gland appears to have a definite and important function—that of promoting the development of the human nervous system. How it so acts can only be surmised at present, but presumably the gland supplies a minute amount of intracellular ferment accelerating the growth of the gray matter of the brain. In metabolic experiments upon young animals Dana and the author were able only to hasten somatic development, but when giving it to defective children they found that in most cases where there was no grave organic defect of the brain, the mentality showed a steady and gratifying improvement lasting over the whole period of administration. It has also occurred to the author that pineal gland will arrest or retard many cases of premature senile decay of the mental faculties. He has had encouraging success so far in this direction.

MEDICAL ETHICS UP TO DATE.—1. If called by night to attend a stranger at a distance, dress quickly and go, never stopping to ask who wants you, or if the bill will ever be paid, lest you be counted inhuman.

2. Never ask how many doctors are in attendance in a case, or how many kinds of patent medicines a patient is taking. Such curiosity on the part of the doctor is vulgar.

3. Never insult a stranger by asking for credentials, nor a patient by asking for money—pounds and shillings are the vernacular of bankers, lawyers, tradesmen, and “workers.”

4. Never send in a bill; patients will think you are hard up, but pay your bills promptly. Send a check; it looks better.

5. In writing a prescription write illegibly.

It does not matter. The druggist will put in "something just as good."

6. Be sure to mention the fact of your being overworked, and also cholecystitis, appendectomy, opsonic index, operative work, toxemia—words which impress the laity. Your wife must tell her friends how busy you are.

7. When going by a patient's house slip in socially and tell her of some interesting case, or some operation you have just performed and incidentally mention how busy you are.

8. Never be friendly with any other doctor. It's unethical. If you think another doctor makes a guinea more a month than you do, cut him dead.

9. If another doctor's name is mentioned in your presence compress your lips, and the patient will understand that your hypertrophied good principles keep you from telling the truth, the whole truth, and a few other things. Do not have your principles so high you can't reach them.

10. If called in after another doctor has been treating a case of meningitis, make your diagnosis "inflammation of the brain," and be sure to say how much better it would have been had you been called in earlier.

11. It is understood that you would not interfere with gestation, but it is well to tell of the large sums of money you have been offered and refused.

12. If the other fellow does not think as you do, it proves his inferior intellect.

13. Jealousy and envy are the tributes paid to superiority.

14. Do not expect the "glad eye" when you give the "cold shoulder."
—*New Zealand Medical Journal*.

THE EFFECT OF DIGITALIS ON THE BLOOD PRESSURE AND PULSE PRESSURE IN THE PRESENCE OF CARDIAC DECOMPENSATION.—By Charles H. Lawrence (*Boston Med. and Surg. Jour.*, January, 1914).—Lawrence states that the majority of authorities advise against the use of digitalis "in those conditions in which an increase of circulatory tension might give rise to unfortunate results." In this category would come the hypertension of arteriosclerosis and chronic nephritis. "As a result of this teaching," the author says, "digitalis is not administered in many cases of cardiac decompensation because there is a co-existing arterio-sclerosis, hypertension, or angina pectoris."

Contrary to this view of the subject the writer mentions the observations and conclusions of Price and MacKenzie, who found that digitalis rarely causes a rise in blood pressure.

The author reports twenty-six cases of cardiac decompensation to whom was administered digitalis. Observations were recorded on the blood pressure during the course of treatment.

The results are summarized as follows:

"Of the twenty-six cases recorded, five, or 19 per cent., showed a rise in systolic pressure, the greatest increase noted being 30 mm.

"Of the group of cases showing a rise in systolic pressure none showed a diuresis.

"Four cases, or 15 per cent., showed no change in systolic pressure. Of these, none showed a diuresis.

"Seventeen cases, or 66 per cent., showed a fall in systolic pressure either during or immediately after the administration of digitalis preparations. Of these, 88 per cent. showed a diuresis.

"Only one case showed a rise in diastolic pressure. There was no diuresis.

"Four cases, or 15 per cent., showed no change in diastolic pressure. Of these, 75 per cent. showed a diuresis.

"Twenty cases, or 74 per cent., showed a fall in diastolic pressure, 63 per cent. of these showing a diuresis.

"Twelve cases, or 45 per cent., showed an increased pulse pressure, a diuresis occurring in 50 per cent. of this group.

"Three cases, or 11 per cent., showed no change in pulse pressure. A diuresis occurred in every case in this group.

"Eleven cases, or 42 per cent., showed decreased pulse pressure."

The conclusions drawn by the author from his observations are:

"1. The effects of various drugs on the blood pressure, as determined by experiments on animals, do not furnish reliable criteria for the administration of such drugs to man, since the effect may be quite different in the latter.

"2. The pressure-raising effect of digitalis noted in animals and in healthy individuals does not occur, as a rule, when the drug is administered to individuals suffering from cardiac decompensation.

"3. The cause of the cardiac decompensation does not appear to affect the action of the drug.

"4. Digitalis preparations may be safely administered to patients suffering from arterio-sclerosis, angina pectoris, or nephritis hypertension, if cardiac decompensation is present; under such conditions it rarely causes a rise in blood pressure.

"Of the twenty-six cases studied, eighteen were discharged relieved. Of these, 76 per cent. showed a fall in systolic, and 86 per cent. showed a fall in diastolic pressure during or immediately after the administration of digitalis. It appears, therefore, that such a fall is entirely compatible with improvement in the patient's condition. Two cases were discharged unrelieved, and six cases died. No conclusions can be drawn from this last small group of observations, especially as the changes in blood pressure noted were about evenly divided as to increased or diminished readings."—*Post Graduate*.

A CLINICAL STUDY OF 100 CASES OF PNEUMONIA.—Lindsay (*British Medical Journal*) says that in the presence of any signs of circulatory weakness strychnine is to be given hypodermically, and ammonia and digitalis, and sometimes caffeine, by the mouth. Alcohol is used sparingly, and only in the more serious cases and in moderate or small quantity. Of the 100 cases in his series, only 39 received any alcohol. Brandy was the usual stimulant, and the amount seldom exceeded three or four ounces. In the presence of unusual dyspnea or cyanosis oxygen is administered, the gas being passed through alcohol. Tepid sponging is vigorously practiced in

every case, and cold sponging when the indications seem to point to its use. Antipyretics or expectorant drugs are not administered.

Bleeding was not employed in any of this series of cases, though he had had some small experience of that procedure elsewhere. For the relief of persistent insomnia, paraldehyde, bromides, and morphine are sparingly used. The various complications, when they arise, are treated upon the usual lines. After the crisis all special medication is suspended, the patient is allowed a liberal diet, and some tonic is administered. Alcohol is always stopped at this stage, unless there are serious complications.

He has never used ice bags or ice poultices to the chest in pneumonia, and can furnish no evidence as to their value. This method of treatment does not appear to be gaining favor. There seems to be some danger that it might depress the heart. As clots are found post mortem in the right heart in many fatal cases of pneumonia, he tried the administration of citrates and citric acid in a few cases some years ago, but could not satisfy himself that this line of treatment presented any advantage. The doctor has made a limited trial of serum treatment, but has not felt encouraged to persevere with this method. On theoretical grounds pneumonia seems a particularly unpromising field for vaccine therapy. We may yet get an efficient serum, but up to the present no such remedy appears to be available.

He has seen bleeding employed in a few cases, and there is no doubt that the removal of a few ounces of blood tends to relieve the laboring right heart, and to mitigate the dyspnea. But he states he has no wish to see this long-discarded method reintroduced into general favor. If applied without great discrimination, it is quite capable of turning the frail balance against a patient at the critical juncture. We should need some definite statistics to prove the efficacy of venesection before adopting it as a common expedient. Text books give the practice a sort of qualified benediction, but cautious practitioners are shy of it at the bedside.

The value of alcohol in pneumonia is a vexed question. Lindsay asserts he inclines to its use in moderate quantity in severe cases, and in the presence of circulatory weakness, especially in patients who are no longer young and who have been accustomed to it in health. In mild attacks, in most young patients, and where the pulse is good, it is better withheld. It should certainly not be given in any routine fashion or in excessive quantities which were at one time in vogue. If we may often be in doubt as to the wisdom of prescribing alcohol, we can generally tell without much difficulty whether, when, given, it is proving of service. The effects upon the pulse, the nervous system, the skin, the urine, and upon sleep are the chief points which should guide us in this matter.

TREATMENT OF HEMATEMESIS.—Grunbaum (*The London Practitioner*) states that one of the first measures in hematemesis should be to assure the alarmed patient that the condition is common and recovery the rule. Mental agitation can be further diminished by an injection of one third grain of morphine. The writer doubts whether ill effects result from carefully transferring the patient to a bed. The head should be low if the loss of blood is so great as to lead to oligemia of the brain and consequent faint-

ness, but in the absence of this the patient should be arranged in the position he finds most comfortable.

As for drug treatment, suprarenal extract in one dram (4 c.c.) doses or the one in 1,000 solution is advised by the author. To avoid the secondary vaso-dilator effect, the drug must be given at short intervals—not over an hour. Ferric chloride and tannic acid are unsatisfactory, for they convert the blood in the stomach into a hard mass, which irritates the mucosa and leads to vomiting or retching. Ergot is unsuitable because it is absorbed and leads to a rise of blood pressure. Turpentine is of great use when adrenal extract is not available; but if given frequently, even in small doses, this agent may lead to nephritis. If the adrenal extract, together with one grain (0.06 gram) doses of neutral calcium chloride, does not arrest the hemorrhage, lowering the blood pressure with aconite may be considered. The patient should be informed that this drug will make him feel very faint and ill, but that it cannot be helped, and that in a few days' time great improvement will occur. Two minims (0.12 c.c.) of tincture of aconite may be given every half hour until the heart rate falls below sixty or the pressure below ninety mm. Hg., or the heart becomes very irregular. If the stomach is full of blood, rendering administration of the drug by mouth futile, a dilute solution of aconite in slightly alkalized normal saline solution may be given hypodermically; or, occasionally, tincture of aconite may be added to enemata.

For the first three or four days the stomach should be kept empty and water supplied to the patient in the form of saline rectal enemata, six ounces (150 c.c.) every four hours. Only if the patient is very emaciated are nutrient enemata advisable.

When the hemorrhage has stopped, treatment should be directed to healing the ulcer. The diet should be liquid, and rich in proteid, in order to fix hydrochloric acid in the stomach. It should not contain albumoses and meat extracts. Feeding should be at relatively short intervals, and it may be advisable to neutralize the acid secretion by giving moderate amounts of bismuth subcarbonate, magnesium oxide, sodium bicarbonate, and calcium carbonate. The food should not be that especially liked by the patient, as this would lead to a more pronounced secretion of acid. Probably the best diet in most instances consists of an egg beaten up in one half pint (250 c.c.) of milk, taken every two hours. If constipation results, liquid paraffin, when it does not cause retching and nausea, appears to be the best laxative for these cases.—*London Practitioner.*

ETIOLOGY OF HODGKIN'S DISEASE.—C. H. Bunting and J. L. Yates state that in a preliminary note published in November, 1913, they reported that by repeated injection of the diphtheroid organism, cultivated by them from cases of Hodgkin's disease in monkeys, lesions of the lymph nodes were produced, showing all essential features of early Hodgkin's disease. Up to that time they had been unable to demonstrate that the organism could survive in the monkey for any great length of time, and therefore could not assert they had produced Hodgkin's disease or had even demonstrated any great pathogenicity of the diphtheroid organism for the monkey. Since then, their experimental work has demonstrated fully the pathogenicity of the culture they were using, and has further shown that virulence of the organism to the monkey may easily be increased, even producing death

after a relatively acute illness. While the histogolical pocture of the enlarged lymph nodes of the monkey, taken three months after successful inoculation, shows the relation of the lesion to that of human Hodgkin's disease, it seems difficult to secure infection and at the same time avoid virulence so great as to produce extensive necrosis and softening, and even suppuration.—*Jour. Amer. Med. Association.*

SERUM DIAGNOSIS OF CANCER.—R. Erpicum, in the *Presse Medicale*, reviewing results of tests for cancer other than Abderhalden's, points out that the best of these—the complement deviation reaction—has given only eighty-six per cent. of positive results in cancer cases and, on the other hand, 7.6 per cent. of positive results in non cancer cases. With Abderhalden's serum diagnosis he obtained 50 positive reactions in 51 cases of malignant tumor, i. e., 98 per cent. of correct results; two of these cases were sarcoma. He uses the biuret test instead of that with ninhydrin, as now carried out by Abderhalden, preferring the former because of its far greater sensitiveness, any error in technic at once showing itself in the result of the biuret. This test responds to peptone, but Abderhalden himself considers the possibility of the presence of this body in the serum negligible, and Erpicum always washes the cancer tissue until the biuret test, if previously positive, disappears. In using the biuret test in the Abderhalden reaction, the author adds to fluid containing the dialysate one fourth its volume of potassium or sodium hydroxide, and, after this, one or two drops of a five per cent. copper sulphate solution. If the reaction is positive, a reddish zone appears about the drop of copper solution and spreads throughout the mixture, the blue drop itself being decolorized; if it is negative, the drop sinks to the bottom and forms a light blue deposit. The author reports a case clinically diagnosed as gastric dilatation with cicatricial stenosis, which gave a positive serum reaction and proved cancerous at operation. In another case the incomplete hysterectomy apparently indicated foruterin fibromyoma was changed to complete hysterectomy because of the positive serum test; microscopic examination of the specimen removed showed cancerous changes. The author describes experiments supporting the view that Abderhalden's reaction is closely related or analogous to the process of immunity.—*New York Medical Journal.*

PEPTIC ULCERS.—Christopher Graham says that in discussing the diagnostic features of duodenal and gastric ulcers we should consider the periodicity of attacks, chronic course, significant symptoms that appear during the period of attack, the more or less ready control of symptoms. When a patient presents himself with a history of gastric disturbance, occurring day after day for several days or weeks, followed by remissions or intermissions of weeks or months of perfect health, an ulcer is to be strongly suspected. These symptoms come and go for years, remaining the same in character, but increasing in duration and intensity. The average duration of symptoms in cases observed was eleven or twelve years; in only a few was it less than a year. The history of prolonged attack, with intermission or remission, was clear in eighty-five per cent. Pain is the most constant symptom and is characteristic. Location of pain, its type, area of radiation are of secondary diagnostic importance, because most pain is described as epigastric regardless of the location of the lesion; it

varies from mild distress, or burning, griping, or colic, to a severity requiring opiates. Radiation is not common in uncomplicated ulcers, and if a clear cut radiating pain to the back, or lower abdomen occurs, colecystitis or appendicitis may be inferred. It is the time of pain, of its appearance, manner of its disappearance, and its control by food, alkalies, position, and rest that are conclusive evidences. Pain appears after meals, or in clear cut duodenal types two hours before meals. It usually comes on half an hour to four hours after eating; the nearer to the gastric outlet the lesions are situated, the longer the period of food ease. Burning, gnawing, painful feeling begins sooner or later, following a definite type in each case, increasing in severity and continuing until the stomach empties, and either ceases before or continues up to the next meal time. Early cessation of pain is noticed most often when the ulcer is above the pylorus. In the purely duodenal types the pain begins later and may continue until vomiting, irrigation, alkalies, or the next meal brings relief. Food relieves pain, gas, and acidity in seventy-six per cent. Relief lessens as the lesion extends, and is little or absent in the late stages. Hence typical diagnostic symptoms of peptic ulcer are: 1. The period of attacks and perfect intermission or marked remission of attacks; 2, almost exact similarity of symptoms occurring for days during the period; 3, marked relation of symptoms to food intake; 4, the control of symptoms by food, alkalies, lavage, posture, and rest.—*Boston Medical and Surgical Journal*.

ON TREATMENT OF LEUKEMIA WITH BENZOL.—By Lwellys F. Barker and James H. Sibbes. (*Bulletin of the Johns Hopkins Hospital*, December, 1913.)—The recent therapeutic use of benzol in leukemia was suggested by clinical and experimental investigations concerning benzol poisoning. Selling in 1910 concluded that benzol in certain dosage destroys white blood cells or inhibits their formation in leukopoietic tissues without injury to the red cell or to the erythropoietic apparatus. Large doses cause a great diminution in the platelet count. The clinical evidences of benzol poisoning are giddiness, headache, gastrointestinal symptoms, purpura, anemia and leucopenia.

The writers find in the literature records of 18 cases of leukemia and more or less closely allied diseases in which benzol has been used. They contribute one case of splenomyelogenous leukemia, similarly treated at the Johns Hopkins Hospital. In the cases on record, as in the case here reported, benzol was given in dosage of from 3 to 5 grams daily, and was best handled mixed with an equal quantity of olive oil. In the cases of leukemia the white cells began to diminish at the end of two weeks, usually falling to normal in two or three months. Improvement in the anemia seems to have been the rule. Differential white cell counts have shown that the abnormal cells persist, though greatly diminished. Decrease in size of the spleen with marked improvement in general symptoms is reported as usual. The writers plead for a fair trial of the drug.

MANAGEMENT OF BREAST FEEDING.—Naish, in the *London Lancet*, says that few mothers understand that the baby's cry during the first two or three days, before the flow of milk has become established, is not a cry of hunger but a natural process for the full expansion of the lungs; conse-

quently they are worked up into a state of feverish anxiety. A vicious circle thus results, the nervous condition affecting the milk supply unfavorably. The writer carried out a series of test feeds on one baby during the first month of life, testing almost every meal during this period, and was unable to find any relationship between the amount taken and the amount of crying between the feeds. Suckling a child is associated with distinctly nervous phenomena. Insanity has a tendency to appear at such times, and the lesser grades of insanity merge into what is a very usual condition, hyperexcitability. A headache which comes on with greater intensity when the mother tries to go to sleep, and which effectually prevents sleep, is quite common. It is often easily controlled by phenacetin and caffeine. Rest is most essential. Bromides at night will enable the mother to get to sleep again quickly if she is aroused to feed the baby. There are certain periods when the milk tends to fail and when it is particularly easy for weaning to take place. These danger times are the ninth day, third and sixth weeks, and the beginning of the third and fourth months. At these periods exercise, fresh air, sleep, etc., should be insisted upon.—*Charlotte Medical Journal*.

CHRONIC INTESTINAL STASIS.—Arbuthnot, Surgeon to Guy's Hospital, London, says, I employed the term "chronic intestinal stasis" to indicate such an abnormal delay in the passage of the intestinal contents through a portion or portions of the gastro-intestinal tract as results in the absorption into the circulation of a greater quantity of toxic or poisonous materials than can be treated effectually by the organs whose function it is to convert them into products as innocuous as possible to the tissues of the body.

Stasis of the small intestine with the associated infection of its contents by organisms to which it is unaccustomed is not primary but is secondary to a stasis in the large bowel.

In other words, if it were not for the presence of the large bowel the conditions producing stasis in the small intestine would not arise. If the caecum did not become overloaded the obstruction to the ideal effluent, either by an acquired mesentery, an appendix hitching it up, or by simple stasis would not develop. Consequently the contents of the small intestine would not become infected by organisms, the duodenum would not be blocked by the drag of the small intestines obstructed at the end of the ileum, the mucous membrane of the duodenum would not inflame and ulcerate, the biliary and pancreatic ducts would not be infected and obstructed outflow from the stomach, with all its associated sequelae, would not occur.

Now I wish to show that the extraordinary improvement that results from short-circuiting and the disconnection or removal of the large bowel is due largely to the fact that the evacuation of the small intestine is facilitated by its introduction into the pelvic colon, and that the infection of its contents by organism which grow in the stagnating material in the large intestine ceases abruptly. I do not wish to suggest that all absorption of toxine takes place from the stomach and small intestine, but I do maintain that the tract other than the colon plays a very important part, and I believe by far the most important part in the process of absorption. It appears to me that the point of greatest difficulty in the passage of ma-

terial along the gastro-intestinal tract is through the last few inches of the ileum. This is particularly the case when the caecum has been securely fixed by acquired adhesions in the iliac fossa. In such cases the delay of the effluent at the pelvic brim may be very great; indeed, in one of my cases which Dr. Jordan has examined with bismuth and the X-rays, the material remained in the terminal coil of the ileum for as long as eighty-five hours without there being found at the operation any evidence of interference with the effluent by an acquired peritoneal band or by an appendix in such a position behind the small bowel as to control the passage of material through it in certain positions. Now this form of simple obstruction, which cannot be recognized at the time of the operation, and can only be determined by bismuth and X-rays, I call the "simple static variety." I use this term as opposed to the more obvious variety in which the bowel is controlled by an acquired band or by an appendix, either of which is readily recognized when the abdomen is opened, though the extent of its effect on the effluent can only be gauged by bismuth and X-rays.—*Charlotte Medical Journal.*

A NEW DIAGNOSTIC SIGN IN INJURIES OF THE ABDOMINAL VISCERA.—Cases of traumatism in which there is suspicion of internal injury cause the physician or surgeon no little anxiety and call for an exhibition of rare judgment and often it is very hard to decide whether to watch and wait or to do an immediate laparotomy. Furthermore, delay in such cases is usually fatal and recovery the exception rather than the rule. The author has noted a symptom, which when present indicates that the abdomen should be opened as soon as possible, whether other signs indicate grave trouble or not. This sign consists in the transmission of the heart and respiratory sounds, so that they can be heard all over the abdomen almost as well as over the chest. No stethoscope is needed, the ear alone being sufficient. It is present soon after the reception of the injury and may last for several days, but it is never present in cases of extraperitoneal rupture of the bladder, or in injuries of the abdominal wall, without internal injuries. Claybrook has found this sign present in cases of ruptured mesentery with hemorrhage, ruptured bowel, ruptured spleen, ruptured liver, ruptured tubal pregnancy and immediately after rupture of the appendix. It should be of help in differentiating ruptured gastric or duodenal ulcer from appendicitis as it will appear at once in the former and not until after rupture has occurred in appendicitis. The sign is not found in slowly developing effusions as in peritonitis or ascites. Although a reliable, positive sign, it is not infallible negative sign of internal injury. In other words the absence of this sign should not be taken as proof positive of the absence of internal injury.—E. B. Claybrook, M.D., *Surgery, Gynecology and Obstetrics.*

W. A. VANDERVEER.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

THE TWO VERATRUMS.—By Alexander C. Hermance, M. D.—*Veratrum album*, or the white hellebore of Europe, and *veratrum viride*, the green hellebore of America, although similar in name are very dissimilar in their drug action and indications calling for their use. The provings are both made from the tincture of the root.

Veratrum album is an old remedy. It has been in use since Hahnemann's time. It acts prominently upon the abdominal organs, while *veratrum viride* affects principally the cerebrum and upper part of spinal cord.

In its general action *verat. alb.* produces profound prostration, cardiac weakness, cold skin, with cold sweat on the forehead, and collapse, violent purging and vomiting with terrible colic and at times cramps, muscular spasms or rigid contractions of muscles, even tetanic. It produces a paralysis of the splanchnic nerves, which causes the blood vessels to be over-charged with blood and pour forth their serum. The prostration and the terrible sinking sensation and coldness that belong to *verat. alb.* all start from these nerves. A notable characteristic of this drug is that almost every important symptom wherever produced is accompanied by cold sweat on the forehead. The great weakness and sinking sensations would lead us to think of *arsenicum*, but there is this difference, the weakness is not disproportionate to the other symptoms; is not more than might be expected from the general disturbances which mark the case, and there is not the restlessness and anguish of *arsen.*, the patient being quiet.

We must not infer that *verat. alb.* presents no cerebral symptoms, but we usually have the coldness and weakness associated with them and the cold sweat on the forehead. It has a delirium similar to *bell.*, *stram.* and *hyos.*, great loquacity, strikes those about him, lewdness in talk, etc., but the skin is cold with the cold sweat on the forehead. In troubles arising from disturbance in the female sexual sphere it has some characteristic indications like nymphomania. The patient is lewd in extreme: wants to kiss everybody—great propensity for kissing, especially during the menses. I know of no other drug that has this symptom. Like *gels.* it has diarrhoea after fright. Here again we have coldness and prostration.

The digestive organs are eminently affected by *verat. alb.* There is an aversion to warm drinks (also *ferrum phos.*) and a feeling of coldness in the mouth, such as peppermint produces. This is a peculiar symptom. *Tart. acid* has coldness in mouth, but not as of peppermint.

The grand sphere of this drug is in affections of the bowels, cholera morbus, cholera infantum, Asiatic cholera, and in intussusception of the bowels. The stools in diarrhœa are profuse and watery-greenish, containing little flakes that look like spinach, sometimes bloody and always with sharp, cutting pains in abdomen; great weakness almost fainting with cramps in limbs; often with vomiting, and the cold sweat on forehead. Farrington says, "It is useless to give *verat.* in bowel affections unless there is pain." The pains are colicky, running through abdomen with cramps, especially of the calves of the legs. The aggravations are from hot weather, at night, during and before menses, after fruit, and taking cold.

Patients want to be covered.

Camphora is very similar to *verat. alb.* in many respects. It produces coldness and symptoms of collapse, but the *camphora* patient cannot bear to be covered. The cold sweat is on the face and not the forehead especially. The discharges are apt to be scanty. The keynote of *camphora* is "Cold as Death," but cannot bear to be covered. It is indicated more particularly in the beginning of the disease. The later stages require *verat.*—body icy cold and the collapse is more profound.

Podophyllum is much like *verat.*, as it presents a perfect picture of cholera morbus, but absence of pain (also *phos. acid.*) The mealy like sediment, prolapsus ani and the large, copious stools which do not proportionately weaken the patient serve to characterize this remedy. *Iris versicolor*, Farrington says, is better suited to summer complaints of children than is *verat. alb.* *Iris* has a marked aggravation from 2 to 3 A. M., burning from throat to anus, stools yellowish green and oily. *Arsen.* and *puls.* are to be compared with *verat.*, both having midnight diarrhœas, but both have such marked characteristics as to easily differentiate from *verat.* *Arsenicum* with its restlessness and thirst, burning pains, etc.: *puls.* after fat or rich food, ice cream and its characteristic peevish disposition. *Croton tig.* is similar also to *veratrum* in bowel troubles. It (*Croton tig.*) comes in when stools are yellow or yellowish green, coming out like a shot, with a rush or splutter like water from a hydrant, provoked by every attempt to eat or drink. Farrington says, "I have often found *verat. alb.* useful for cardiac debility following acute diseases when the heart muscles become weak and patient faints on moving." This condition doubtless is covered by the following symptom—while in bed face is red, after getting up it turns deathly pale. The following is an epitome of the most characteristic indications for *verat. alb.*: Cold perspiration on the forehead in nearly all conditions, vomiting and purging at same time, collapse with extreme coldness, weakness and blueness of skin, cool sensation as from peppermint in mouth; copious vomiting aggravated by drinking and motion; diarrhœa copious, forcibly evacuated, yellowish, watery, followed by great prostration; sexual mania before and during menses with propensity for kissing; aggravations at night, in hot weather, from warmth, before and during menstruation. It is essentially a cold

remedy, cold sweat, cold skin, cold breath, cold taste. In fact, in all conditions calling for *verat. alb.* there is coldness in some form.

Veratrum viride.—Unlike *verat. alb.* this drug produces no marked bowel symptoms, its principal action, as I have said, being upon the brain and spinal cord. It is also a respiratory poison producing asphyxia and cardiac paralysis. It paralyzes the vasomotor centers, causing low temperature, cold sweats and collapse. In large doses it produces convulsions. It produces vomiting, but not purging. In toxic doses it produces engorgement of the lungs and high degree of arterial excitement. It is to be thought of in all conditions where there is a rapid pulse, high temperature or a tendency to erratic convulsive movements. One of its pronounced characteristics is a high fever even with perspiration. It will reduce a temperature of 104 degrees to 102 degrees in a few hours. It should be compared with such remedies as *acon.*, *bell.*, *baptisia*, *gels.*, *stram.* and *hyos.* Its action is principally upon the base of the brain. It is a valuable remedy in cerebral apoplexy, cerebro-spinal meningitis, cerebral hyperæmia, the effects of sunstroke, also in epilepsy, hystero-epilepsy, chorea, convulsions of all kinds. The delirium is violent and furious, trembling and jerking as if going into convulsions, continued jerking and nodding of the head, puerperal mania following convulsions, dry mouth, tongue coated yellow with red streak down center, feels scalded. It has the beating, throbbing headache of *bell.*, without the heat. The headaches are usually up the back of the head from blood pressure and is especially adapted to full-blooded plethoric subjects.

The delirium, throbbing carotids, dilated pupils make us think of *bell.* The *bell.* patient, however, has a marked aversion to water, has hot flushed face and glaring eyes with its usual characteristic hallucinations of monsters and hideous faces. The tongue is red on the tip or strawberry.

The *gels.* characteristic is dizziness, drowsiness and dullness. The tongue trembles as if paralyzed. The face has a besotted look like *baptisia*, with drooping of lower jaw. The *aconite* patient fears death, predicts day of death with terrific restlessness and anguish, dry, hot skin, etc. The tongue is coated white.

Hyos. has jerking muscles, staring eyes, but is characterized by its foolish laughter, and immodesty.

Stram., as you know, is most similar to *bell.* and *hyos.* The *stram.* convulsions, however, are caused or aggravated by bright light or brilliant objects. It also has more fever than *bell.* or *veratrum viride.*—*Homœopathic Recorder.*

ADONIS VERNALIS.—This herb constitutes a tonic, cardiac stimulant and diuretic of frequent usefulness, but it is seldom mentioned in journal literature. Its action resembles that of digitalis, but so far as I have been able to observe it is not cumulative. In large doses, however, it is an irritant, and cases have been recorded in which it caused paralysis of the nervous apparatus of the heart. It should therefore be used with caution.

In functional wrongs of the heart I have employed adonis with curative results. Even in organic diseases of the heart it has often improved the condition of the patient, and in such cases its tonic influence is frequently unmistakable. In difficult breathing associated with feebleness of

the heart its action is decidedly relieving. It is also a good remedy in the palpitation of the heart which often afflicts nervous women. Adonis is especially indicated in conditions characterized by slowness of the pulse. In one of my cases, a man aged 55, the pulse ranged from 40 to 50 beats per minute. After a week's use of small doses of adonis his pulse became stronger, more regular, and 70 per minute. His respirations were also much improved. The medicine was continued for several months, and the patient made a good recovery.

Ten to fifteen drops of the specific medicine added to four ounces of water makes an efficient prescription, and a teaspoonful of the mixture should be administered every two hours.—*Dr. J. W. Fyfe in the Eclectic Review.*

SOME EYE REMEDIES—JOHN L. MOFFATT, M. D.—*Clematis Erecta*. Objective.—Myosis. Eyes red and glittering, hot and dry Inflammation of the whites

Subjective.—Photophobia: great sensitiveness to cold air, light and bathing. Biting burning in the eyes as if fire streamed out of them. Dryness and heat, compelling to close the lids. Smarting, rawness. Pain in middle of left eyeball. Pressure in orbits on moving eyes.

Clinical.—Has been useful in iritis, keratoritis; scrofulous and mercurial affections.

Cocculus Indicus.—Objective.—Lids inflamed. Sclera red, cornea hazy, Myosis.

Subjective.—Bruised or pressive pains in eyes; hard to open lids, < at night. Pain in eyes as if torn out of head.

Vision.—Right hemianopsia; can see only left half of the line when reading.

Characteristics.—A prostrating nausea. The cerebro-spinal system is debilitated.

Clinical.—Asthenopic headaches, occiput and neck. Car-sickness; sea-sickness.

Colchicum Autumnale.—Objective.—Inflamed eyes. Lacrimation, < open air. Lids in constant motion.

Subjective.—Violent tearing pains in the eyes.

Characteristic.—The smell of food is very repugnant, even to nausea.

Clinical.—Rheumatic gouty cases, particularly with debility; in this case beware of large doses.

Colocynthis.—Subjective.—Pains sharp, screwing, cutting, boring, by pressure.

Clinical.—Neuralgia. Useful also in controlling the pains of iritis and glaucoma; these may be severe burning, sticking or cutting, extending from the eye into the head and around the eye, or else an aching pain going back into the head, usually < on rest at night and on stooping, and by firm pressure and walking in a warm room. Sometimes there is on stooping a sensation as if the eye would fall out.—*Journal O. O. and L.*

THE HAHNEMANNIAN MONTHLY.

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A Symposium on the Early Recognition of Cancer*

THE BREAST.

BY

WILLIAM B. VAN LENNEP, A.M., M.D., F. A. C. S., PHILADELPHIA.

ONE of Philadelphia's most eminent surgeons is responsible for the statement, in a recent address, that of the 75,000 deaths from cancer in this country each year, fully 7,000 are the victims of malignant disease of the breast. Also, that the annual death rate from cancer in Philadelphia has increased during the past forty years from 41.3 to 86.3 per 100,000 of the population. This gloomy picture applies not only to our own city and country, but also to the entire civilized world.

Cancer seems to remain the one opprobrium of surgery and when I say "cancer," I use it as a general term, the one employed by the laity, to mean malignant disease, sarcoma, carcinoma and epithelioma, just as tuberculosis is that of medicine and this in spite of untold endeavor, experimentation and expenditure of money in the search after its cause. Even should this cause be ultimately discovered, we have no guarantee that it will insure a remedy, for the tubercle bacillus was demon-

*An educational symposium on the early recognition of cancer, presented at the regular monthly meeting of the Homeopathic Medical Society of the County of Philadelphia, February 12th, 1914. This symposium was arranged for the purpose of bringing before the general public some of the important points in the early recognition of cancer. The meeting was therefore open to those outside the profession as well, especially social workers and nurses from the different hospitals.

strated by Koch over thirty years ago and the "white plague" is with us yet and steadily on the increase.

I have just mentioned cancer as the opprobrium of surgery and this is particularly true of mammary cancer, but such is the case because surgery is our only hope and the chances of its success depend entirely on the period in the disease at which the remedy is applied. It has been demonstrated beyond all peradventure of a doubt, that cancer is primarily a strictly local disease and that its complete extirpation will be followed by a permanent cure. This is particularly true of malignant disease of the breast, which I might term an external form of internal cancer, as distinguished from similar superficial lesions in the skin; a form that can be recognized by touch and even by sight and can be readily and safely explored and is therefore more easy to diagnose than the internal growths: of the stomach, œsophagus, large intestine, gall bladder and even the appendix.

While the X-rays and radium may temporarily palliate its symptoms or retard its growth, as I have said before there is no known cure for cancer of the breast but complete extirpation, while it is strictly localized and before the disease has soaked into the channels leading from the gland, or has been carried to other organs. It is just here that both the medical practitioner and the public generally must do their part, and a most important part, for after all the mortality of mammary cancer lies at the door of *procrastination*.

Carefully prepared statistics show that cases of mammary cancer do not reach the surgeon until eighteen months or more after the growth was first noticed by the patient and that then fully one third of them are inoperable or hopeless, and, furthermore, that the family physician is first consulted, on an average, at the end of six months. This delay on the part of the patient is not altogether due to dread of operation or mutilation, but to a *secretiveness* which I have come to regard as just as characteristic of breast cancer as *hopefulness* is a constant mental state in pulmonary tuberculosis, even to the end. I have known women to conceal their secret from husband and daughters until the foul odor and hæmorrhages told the tale and there was no longer any hope of cure. The remaining twelve months are spent in "observation" or "remedial treatment" by the physician, who, unfortunately, still awaits the classical signs of well established cancer; retracted nipple or dimpled skin, threatening or actual sloughing and ulceration, attachment to the

chest wall, rapid or stony growth, axillary or cervical nodes, intercostal neuralgia, backache or rheumatoid pains near the shoulder or hip and even a cachexia. These are not the diagnostic symptoms, but signs of absolute hopelessness—symptoms that point to the cemetery rather than to the operating room!

It may be truly said, what can the laity do, if the family physician advises delay and it is equally true that the general practitioner must be convinced of this danger of procrastination, but the laity and public opinion can force the issue, as they have done in many other instances. Twenty-five years ago most cases of appendicitis were “watched” until they went on to perforation and either abscess or fatal peritonitis. To-day, given a pain in the abdomen and a right-sided tenderness, and the average layman will ask his physician if it is appendicitis and the moment the disease is mentioned, surgery and the surgeon are asked for. The laity must be made to understand equally well that a mammary tumor, or, to speak my meaning more correctly if not as technically, a “lump” in or about the female breast is a surgical disease, just as much so as appendicitis, a hernia, a fractured arm or leg, or a carbuncle, and I emphasize carbuncle intentionally, and that the responsibility should be put up to the surgeon at once.

Before taking up the pathological conditions in the breast, let us briefly review some of its anatomical and physiological features.

The mammary gland is made up of lobes and lobules, tubules and terminals or acini, held together by connective-tissue containing the vessels, nerves and lymphatics, and enveloped by a fibro-fatty capsule. In the full-grown, virgin breast we find chiefly fibrous tissue, coarse in structure, poorly supplied with cells and very like tendon; the lobules are small and ill-developed, situated deeply, while few of the ducts end in the above mentioned acini; the lining epithelium is of a low grade, upon a structureless basement membrane. With the commencement of pregnancy, new branches are sent off from the milk-ducts, or tubules, and corresponding acini are formed. At term, when the gland has reached its complete functional size and activity, the stroma has become soft and lax and contains a large number of fully formed lobules. The latter, as in the virgin breast, are deeply seated, numbers of them being found in the surrounding fatty tissue, the capsule having become especially de-

fective underneath. The same is true, to a less degree, of the anterior surface, where glandular tissue is found about the fibrous bands attaching the breast to the skin—the “suspensory ligaments of Sir Astley Cooper.” With the cessation of lactation the ducts and the acini dwindle and the stroma increases and becomes firmer; the lobules decrease in size, and many, especially those in the fatty tissue, disappear. Finally, after the climaxis, the metamorphosis is completed, and only the ducts are left, imbedded in the fibrous stroma.

What greater hotbed can there be imagined for new growths to run riot in than this embryonic structure, with the tremendous hyperplastic and atrophic changes to which it is subjected? At first a stroma, tubules and a few acini, lined by a low grade of cells, protected by a structureless basement membrane; then a development so rapid and extensive as to infiltrate beyond the limiting capsule; again, a partial disappearance of this newly-formed glandular tissue, only to have the process repeated by subsequent pregnancies; finally, a practical return to the virgin, if not to the infantile condition.

Equally striking is the metastatic importance of the lymphatic distribution—probably the strongest argument in favor of early, or *premalignant* extirpation, as well as against late “tinkering.” There are, of course, two sets of lymphatic vessels, the superficial and the deep—the former draining the nipple and the skin, the latter the secreting and conducting portions of the gland. These vessels lead in various directions:

(1) To the axillary glands and those lying on the outer side of the chest a little lower down; thence to the plexus around the axillary vein, to empty by a duct into the junction of the jugular and the subclavian.

(2) Upward over the clavicle into the cervical nodes.

(3) Inward into the anterior mediastinum, on the right side anastomosing freely with the hepatic lymphatics.

(4) Backward into and through the major pectoral, and thence to the side of the chest and axilla, or with the aortic intercostals into the posterior mediastinum and thoracic duct.

Turning to the pathological conditions, we have, in the breast, tissues from which a number of different tumors may develop: a lipoma originating in the fat overlying or underlying the organ, or from that between its lobes; a papilloma springing from the tubular epithelium, or, more frequently, from that lining the cysts of adenomata or sarcomata; angiomata are

possible too, in view of the abundance of the blood vessels, but these, as well as a few other growths are rarities hardly worthy of consideration, when we recall that carcinoma alone constitutes more than 80 per cent. of breast tumors and probably 90 per cent. or more of all of them are sooner or later malignant.

The lesions then, in the breast, that should interest us are the inflammations, acute and chronic, including with the latter the so-called subinvolution or arrested atrophy, and the tumors corresponding with the essential elements which make up the gland, the adeno-fibroma, the sarcoma and the carcinoma.

The acute inflammations are usually those during lactation, the acute mastitis, the "caked" breast, or the mammary abscess. The scar following healing in such cases is a constant potential menace, as it imprisons nests of epithelial cells and, in itself, mimics the stroma of a carcinoma. Given the stimulus of a traumatism, or another lactation, or the increased blood supply available as the rest of the gland retrogrades at the menopause, and the carcinoma in an old abscess cicatrix can be readily understood.

With chronic mastitis, either following a subsiding, acute inflammation, or originating *de novo*, and occasionally presenting evidence of primary or secondary tubercular infection, is included, as above stated, subinvolution or an arrest in the atrophy of the gland, which follows, either an individual activity, as after each lactation, or the end of its functions, at the climaxis. Here, too, are the small cysts containing epithelial cells and lined by a membrane, none too impervious, through which the former, in response to a stimulus already referred to, may break out and grow into heterologous territory. This is known as the disease of Rêclus, or, better still, as the "lumpy breast" of Warren, which should always be watched for any tendency to localized increase in size.

Of the tumors, the adeno-fibroma presents a natural history of peculiar significance, possessing as it does the elements which make up the connective tissue sarcoma and the glandular, epithelial, or connective tissue carcinoma (adeno-carcinoma, enccephaloid and scirrhus respectively).

The adeno-fibromata are divided into three classes:

(1) The so-called periductal fibroma, variously named by different authorities according to some of its vagaries. Without going into the histological details, it is a tumor with a preponderance of fibrous or connective tissue which often includes

small cysts, analogous to those met with in a chronic mastitis. Clinically, it is a nodule or lump, met with in young girls, either in the periphery of, or outside the gland. They are characterized by mastodynia (neuralgia of the breast) at the menstrual period, and, in this connection, the prevalent belief that pain is a diagnostic symptom of cancer should be emphatically contradicted. Pain in cancer occurs late and is just as much a precursor of death as the symptoms mentioned before as classical. These tumors are dangerous only in their potentialities. Given, a girl under 25 or 30, single, and the growth can be watched and the neuralgia treated; but let this same girl undertake the duties of a wife and mother; give her, in other words, a functioning gland, or let her receive a blow on this same "lump" and it should be excised at once and examined microscopically, either during the operation or subsequently. In the presence of even a suspicion of malignant beginnings, a complete ablation must be done.

(2) The fibro-cystadenoma, is similar to the above, except in a more marked cyst formation. The practical point, however, is the close resemblance of these tumors to sarcoma. The age is the same, 30 to 40 years; the location in both is central and this form of sarcoma is very apt to be cystic. The treatment is obvious; exploration and excision, with a complete operation if malignancy is found.

(3) The papillary-cystadenoma is a glandular cyst with epithelial proliferation—a papilloma within it. This is an elderly woman's tumor, centrally located and often associated with nipple discharges which should always put us on our guard when occurring at other than physiological times. These tumors mostly turn to cancer and are better out, together with the entire breast which usually has no further functional usefulness. In this connection mention should be made of the persistent eczema of the nipple, first described by Sir James Paget, which is so frequent a precursor of breast cancer and which calls for most careful observation for any sign of a lump or nodule.

Of the sarcoma, whether of the cystic or solid variety; of the carcinoma, whether the more orthodox adeno-carcinoma, with late or absent metastases, the soft encephaloid soaking early into the tissues and lymphatics, or the stony scirrhus which occupies a metastatic position between the two, let me congratulate the patient and the surgeon who find them absent in any breast tumor, for their presence too often means recurrence. I

have mentioned their classical symptoms and told you that the more distinct these were, the quicker and more sure the consequent death.

In summing up, I am inclined to be a bit retrospective. In 1895 and in 1898 I had the honor of making two addresses on this subject; the former in Boston in connection with a cancer symposium, in which I was assigned, as to-night, the breast; the latter in Reading, my text being "A plea for early operation in mammary tumors." The conclusion drawn in these two papers have not changed in any particular after all these years, but rather have been emphasized by a much broadened experience and the study of that of other surgeons. With your permission, I will quote these same conclusions.

"It seems to me that we can sum up our duty in regard to the pathological conditions met with in the breast as follows:

"Operations for malignant disease, no matter how complete, show an appalling, recurrent mortality. These recurrences preclude all discussion of the cosmetic question of mutilation, as well as that of operative mortality. The latter is only possible after delay and in the presence of complications which contraindicate any surgical procedure. As to the former, I say, let us mutilate a few more women, and see fewer die an agonizing death from that accursed rival of tuberculosis—'cancer.'

"It is impossible to distinguish malignant from benign mammary tumors in time to prevent this recurrent mortality. For practical purposes, then, all mammary nodules or 'lumps' should be excised by a complete operation, either primarily, according to the judgment of the surgeon, or subsequently, if a microscopic examination shows malignancy.

"The same is true, to a slightly modified degree, perhaps, of inflammatory products. Traumatic nodules are better out than in, the thoroughness of the excision being dependent on their supposed or demonstrated character. The results of suppurative processes must be treated according to the amount of destruction and subsequent cicatricial tissue formation. The only function of a breast ruined by a riddling mastitis is to invite malignant growths. The remnants of a less destructive supuration are equally dangerous. A tubercular breast to-day is removed by a complete operation. If chronic mastitis be a possibility, it is more than likely a beginning malignant tumor, or, at least, its prodrome. This applies with even more emphasis to Paget's disease, which sooner or later calls for amputation."

To the above may be added the earlier summary, more brief but certainly as pertinent:

"(1) Every nodule in the breast should be incised—usually excised, and examined.

"(2) Malignancy calls for the most radical operation, no matter how limited or movable the infection.

"(3) Early operations hold out the only hope in this most gloomy of diseases. Late operations are only palliative and often detrimental.

"(4) I am almost ready to believe that a breast containing an abscess is as well out as a pus-tube."

THE UTERUS.

BY

D. BUSHROD JAMES, M. D.

BEFORE dealing directly with the topic assigned me this evening I wish to thank you as the representative of the Executive Committee of the County Society, for the pleasure it affords me to discuss the subject of "Cancer of the Uterus," at this public symposium. I wish also to congratulate you and the committee that you have entered the fight along with the other societies, who are using the means of publicity to educate the people that they will recognize the suspicious symptoms of this disease in its early stage, and thereby lessen the number of unnecessary lives annually sacrificed.

Whenever I have the opportunity to discuss this subject, I am in the habit of quoting from Winter's "*Lehrbuch der Gynäkologischen Diagnostik*" to emphasize the importance of early recognition, as follows: "The diagnosis of carcinoma of the uterus is the most important the physician is called upon to make. The price of failure of diagnosis, or for a diagnosis made too late, is that the cancer has already become unsuitable for operation, and means a human life. Under all circumstances and with all means at our disposal, we must strive to diagnose cancer at the very first examination. To wait in a suspicious case until destructive properties become manifest as was so frequently done formerly, is to-day a most grievous mistake."

Let me impress upon those of you here this evening that

cancer in its early stage is a local condition and amenable to treatment, and that the only excuse for its high mortality may be assigned to one or more of the following causes:

First—Ignorance.

Second—Modesty.

Third—Charlatans.

First—Ignorance.—It matters not how many hours are spent in the laboratories in search of the etiology of this disease, or how many thousands of dollars are spent by philanthropists in search of a cure, or how well we perfect our technique of operations, unless we can so educate the public to consult us early, it will avail nothing. I believe publicity is woman's only salvation, and we as physicians, and the public in general, owe a debt of gratitude to the secular press and the periodicals that have already published articles along these lines, and we trust that they will continue to be our assistants. Publicity was the weapon that lowered the mortality in tuberculosis. Publicity was the weapon that educated the victim of appendicitis to immediate operation, until to-day the first question asked when told of the condition is, "To which hospital shall I go?" Publicity will undoubtedly lessen the mortality of malignancy. We have, however, a more difficult task to handle and the results will necessarily be slower, for society is not ready to allow us to speak in the plainest terms, those that would be recognized by the public, and the press must still use guarded words to express their meanings, and we must, therefore, use other means to educate the public.

Education of the public is not the only thing to be accomplished, for it must be admitted that, too frequently, the members of the medical profession fail to recognize the condition. I know of no disease that places us, as physicians, in a more embarrassing position than this one. I doubt if there is a member of the profession present who has not experienced the chagrin of having a patient, in whom he has made the diagnosis of menopause, the change of life, return in a few weeks or months with a fully developed cancer. I further venture the statement that the diagnosis of menopause has cost more lives and will continue to cost more lives, than any diagnosis made.

Second—Modesty.—It is unfortunate that so many women assume the position of modesty, which should more properly be termed Mock Modesty, as far as their genital organs are concerned, and will not confide with their friends or their im-

mediate family the existence of any symptoms pertaining to these organs, and will even go so far as to deceive their family physician sooner than submit to exposure of these organs for examination. Unfortunately, in this disease they do not have the aid of friends to suggest the possible existence of some wasting disorder as in the suspicious cough of tuberculosis, nor do they have, as an early symptom, pain that drives them to seek immediate relief. Being thus handicapped, it behooves us to educate our girls, not to assume modesty, but to know themselves and to be educated sufficiently as to the normal functions of these organs that when abnormal conditions arise they may recognize them and confide with those that should know.

Third—Charlatans.—The president of the Society, in his introductory remarks, mentioned that there is a period of eighteen months that elapses from the time of appearance of the first suspicious symptom until the patients receive scientific treatment. Much of this time is consumed in “Home Treatment” by the use of well advertised drugs and expedients. We must again call upon the press to aid us in so far that they will refuse to accept the advertisements of charlatans, who for a few dollars will sacrifice human life, deceiving them into believing that they can cure the disease without the knife, the only accepted scientific treatment. I see in the recently exploited remedy, radium, another field opened to those that will practice this mode of deception. Not that there is nothing in the remedy, for it has proven itself to be worthy of a place in our therapeutic armamentarium, in its selected field, but that the public will be imposed upon to purchase articles that will contain so little of the element, or possibly none at all, that it will be useless, and we will again be deprived of the assistance of our best friend—time.

Monetary reasons may often be ascribed as a factor in causing the public to seek advice of friends no better posted of the conditions than the victim, and at their suggestions these remedies are tried, so as to avoid the expense of treatments, or the acceptance of charity. Let me emphasize to those laboring under this impression, that the hospitals and physicians are only too willing to be of service to them, and will gladly treat them when circumstances prevent them from obtaining private consultation.

Let me draw a picture of the most likely victim of this dis-

ease. It is pre-eminently a disease of child-bearing women. Not only is this true but the liability increases with the number of children borne. Statistics show that the average sufferers have given birth to five children. This may be explained on the theory that traumatism, or injury, as the result of pressure during childbirth, so macerates, or lacerates, the parts, that there follows a cicatrix, a tissue below par, that is prone to ulceration. Ninety-eight per cent. of the victims give history of previous traumatism. Women apparently in good health and who rapidly accumulate flesh should be under special observation, for often at the time of maximum weight they seem prone to the disease. It is found most frequently during the decade between forty and fifty, or at the so-called period of change of life. It is a disease that is no respecter of persons and is found in both the wealthy and the poor, and is usually conceded to attack white women more frequently than colored, though the latter are by no means exempt.

Textbooks frequently describe the symptoms in the picture of a three-legged stool, giving place and significance first to bleeding or irregularity in menstruation, second to leucorrhœa, and third to pain. Let me lay especial emphasis upon the statement that when this complexity of symptoms exists, the patient has in all likelihood passed the stage when we can offer permanent relief, and that we must strive for an earlier diagnosis. I am at variance with those who give bleeding as the first symptom, for careful investigation has proven that leucorrhœa precedes bleeding by four to six months. This leucorrhœa manifests itself in the form of an increase in a previous existing leucorrhœa with an alteration in its character, or as a leucorrhœa beginning in one who has never noted the condition. In the early stage it is thin, watery, and resembles beef-brine, but becomes thicker as it mixes with the products of the associated inflammation. It is more or less acrid and from contact with the skin produces an itching of varying intensity, from a mild irritation to intolerance. There is at this time an associated irritability of the bladder, with frequent desire to urinate and with the passage of but small quantities. The condition seems to be aggravated by position and is worse at night. There is also backache associated with the irritability, which is almost constant with no apparent amelioration or aggravation. As the condition progresses, the leucorrhœa becomes blood streaked, after locomotion, coition, or exercise. It is then that we

notice the first evidence of bleeding, shown as an occasional spot on the clothing. This increases in amount until it becomes almost constant. Menstruation now becomes irregular, is too frequent and too profuse.

There is deeply rooted in the minds of the public and also in the minds of too many physicians, the impression that irregularity in the form of increased and frequent menstruation is normal to the menopause. This is a most unfortunate idea and one that we must correct before we may expect the public to consult us earlier, and one that will be difficult because of its long existence.

Let me emphasize most emphatically, that any irregularity in the form of increased amount or shortening of the time between the periods, has nothing to do with a normal menopause, and should always be looked upon with a suspicion of possible malignancy, and should be treated accordingly until proven to be innocent. Any return of a flow after the menopause is even more suggestive of malignancy. The only alteration in the flow that is normal is a gradual diminishing in the amount and a lengthening of the time between the periods; in other words, a gradual cessation. All other types of bleeding belong to some pathological change.

Pain, the third leg of the stool, only exists as the disease has extended and has involved structures that make operative or other therapeutic measures only palliative. It signifies that the results of operation will be but temporary, and that we may expect an early recurrence. From the continuance of the pain, the loss of blood and the absorption of the products of decay the patient rapidly becomes emaciated and cachectic, and a sight pitiable to behold, and death is a welcome visitor.

While I have attempted to show you the typical victim and the common symptoms, it must not be forgotten that there may be great variations, and any or several of the symptoms may be absent, and still the disease exist.

In conclusion allow me to repeat the statement, that this disease with a mortality greater than tuberculosis, is purely local in the beginning and if recognized early may be completely eradicated.

THE SKIN.

BY

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EVERY mole, wart or angioma should be considered a potential cancer, especially where there is an inherent propensity for malignancy. Whether this statement can be accepted in its entirety or not, matters little, as long as the physician will take it upon himself to see that such growths are removed in their earliest incipency, for then will it be possible to prevent cancer in its true picture.

But ten years have elapsed since investigators began their renewed activities in finding the true cause of epithelioma, and the search for a possible cure. While we are still in the very beginning of our work, it is hardly yet possible to state that we have at all reached definite conclusions which would warrant our making specific statements as to the true cause of epithelioma.

With the present campaign of public education which is going on, and the vast amount of clinical research which is being conducted, there is no doubt but that there will be a triumph ending in the discovery of the true cause of cancer. While there have been many theories advanced from time to time, it is not my intention to enter into controversial opinions, but shall limit myself to a resumé of a few of the more recent conclusions as reached by those who have had experience in the investigation of epitheliomas.

Allen contends that the brown pigmented spots which are the sequellae of sunburn bear a close relationship to epithelioma, and he further contends that "the relatively great frequency of epithelioma upon the face may be well attributed, at least in part, to the irritating agency of the chemical rays."

Hyde, in an article on the influence of light in the production of skin cancer, practically takes the same view as Allen, and seems to think that the cells of the skin are stimulated by the inconceivably rapid velocity of the actinic rays. "Relative freedom of colored races, the absolute absence of cancer in Tunis, and rarity in Algiers, finds a natural explanation of the protection furnished by colored skins," so contends Woodruff,

to be found in his writings on the injurious effects of excessive sunlight. Hyde further concludes that the skin of the human body in certain individuals is unusually sensitive to the action of the actinic rays of the spectrum, resulting in the production of numerous conditions of which epithelioma is one.

It is possible that the senile skin, filled with numerous keratoses and senile scum and telangiectases, which are often the forerunners of epithelioma, is the result of the irritating effect of the actinic rays of light having acted over a long period of time. In pigmentations and keratoses and epitheliomas the results are no doubt alike, the one being the result of light as an irritating agent, and the other the X-rays with their more powerful actinic properties extending over a shorter duration of time.

This merely demonstrates the conclusion that actinic irritation is again merely one of the long-continued sorts of irritation which now we presume to be one of the important factors in the production of epithelioma.

It hardly seems probable that we should still consider cancer as a constitutional disease. We can most certainly deny the fact that cancer is really transmitted by inheritance. We can say, however, that certain families do inherit a type of cell structure which has less resistance to the possible implantation of a cancer germ; because I believe thoroughly that the parasitic theory of cancer will be affirmed in time.

While histologically there is shown an excessive reproduction of cells which destroy surrounding tissues and structures, and put in their place their own progeny, it can be explained on the hypothesis that a cancer develops and reproduces itself because of the stimulation of such cells by the presence of infecting germs, causing a change in character of the cells from their normal condition into that of the characteristic cancer cell. That is, the entrance of a cancer germ upon a site which has been undergoing a slow process of irritation or stimulation, which having been enacted during a great number of years, and even, it has been clinically reported, upon the site of a single injury or irritation, shows that it seems necessary to have a lowered existing vitality or some existing abnormal condition of the skin itself.

Gaylord, of Buffalo, and Plimmer, of England, are thorough in their convictions that they have a protozoon that produces

cancer, while Canfelice, of Italy, contends that a mycetic fungus is responsible for cancer growths.

The question as to how the parasite enters into the body has been discussed by Parke, who, according to Knelliott, mentions twenty-eight cases of husbands having received cancers from their wives.

In cancer of the lip, mouth, etc., it is possible that the germ may have its entrance through the normal bodily openings. Constant irritation from cigar and pipe smoking, decayed teeth, etc., may be the niches for the entrance of the parasitic germ.

It has been pointed out that certain houses have possibly contained the infecting germ because of the presence of cancer on those who have resided in these houses for successive years. It has as well been demonstrated that infection of cancer may have been due to germ life because of the fact of epidemics occurring among smaller animals confined in cages, of which very interesting accounts are given by Loeb, Michaels, Borrell, Gaylord and Cowells.

Any existing constantly inflamed area in the aged showing evidences of degenerative changes, or even without that evidence, should always be looked upon with suspicion as being cancerous. It certainly must be borne in mind that the clinical pictures of skin cancers certainly include a large number of types which are not generally recognized as belonging to any particular group, but are sometimes mistaken for the infective granulomata and other skin diseases.

The clinical pictures of epithelioma are usually sufficient to enable the expert to make a diagnosis on them alone; but the safest course to pursue in nearly all cases is to confirm that diagnosis by microscopic examination.

There is one important fact which is not at all thoroughly impressed upon either the laity, upon the student, or even upon the physician himself, and that is the early destruction of all suspicious growths. If such a course were pursued the future generation would be without cancer, because, I reiterate, that I believe the parasitic theory of cancer will be duly affirmed. Our knowledge certainly during the past has not tended that way, but certain it is that indirect evidence does exist that we can possibly have a parasitic hypothesis.

While it is true that all attempts to demonstrate the presence of a specific micro-organism have so far failed, yet let us bear in mind that while for a great number of years it was im-

possible to find or demonstrate the specific micro-organism of syphilis, it has been found; and so there are those who believe that in due time a cancer germ as well will be demonstrated.

Therefore, it behooves the physician, and the public as well, to be informed upon the fact that a person who comes from a family which has a cancer history should all the more observe the proper rules of health and hygiene, and should see to it that the constitution of that individual is always at and above par, and should most certainly keep the strictest vigilance for the presence of suspicious skin growths, which should be immediately and properly decancerized.

CRIME: WHAT IT IS: CLASSIFICATION: SOME OF ITS PSYCHOLOGY.

BY

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(Read before the Lackawanna Homœopathic Medical Society, Scranton, Pa., February 12, 1914.)

THE first idea of the author was to have the title "The Psychology of Crime," but upon further consideration it was decided that the title would not fully cover the proposition. Where does actual crime begin and end? The courts make some distinction in dealing with the different offences against society, and class only certain of these actions in the criminal category, and even in many instances there are many discrepancies in the classification for what is considered crime in one locality may be a misdemeanor in another, or in other words not so serious an offence. One locality will punish for the same act more severely than will another. Therefore, crime would not be the best term to use in this discussion for it would only cover part of the proposition. Crime is a grave offence against the State. It is a sin against the State. Therefore it is axiomatic to state that crime is a form of sin. If we wanted to discuss the psychology of crime fully, we would have to talk of sin anyway, so it was finally decided to give the title as above.

The first thing to determine is what sin is. What is it? There are various definitions, but the author thinks that his own will cover the meaning better than any he has seen thus far, namely, that sin is a deviation from what is right. That will cover the entire ground even as to the possible position

that some may take that sin at one place and time is not at another place and time, that sin with one person would not be sin with another. It is the *right* and *wrong* that decides the crime or sin of an action or thought, and *not necessarily the interpretation that one or another may make of the matter!* Thus a thug does not consider it wrong for him to knock a man down and rob him: the anarchist thinks that it is all right for him to blow up buildings and murder people to gain his end. But neither of them is in reality correct.

Right here we had better stop for a moment and weigh a certain statement—that we are to an extent *responsible for the conception of things as we maintain that conception in our lives!* Even as to religious and other views we build up our beliefs from a certain fundamental basis and are personally responsible for that basis. There are times in the lives of many when a primary truth may be impressed upon them, but they must be willing to have that truth forced upon them or they will not accept it. By our daily actions we are laying the foundation for our more mature beliefs in many things. For that very reason we cannot truthfully say that we are unable to believe this statement or that, *for it is within our power at some time to believe anything!* Again, let it be stated that our belief is based upon experiences of varied natures and that to a great extent we create the atmosphere wherein our experiences take place and hence the experiences in many instances are of our own volition. The one who believes that anarchy and murder are right has schooled himself or herself into that belief (if there be any people who honestly believe in their own souls that these things are justifiable). Frequently one makes himself believe that he is sincere when such is not the case. His actions may be the result of emotionalism rather than of real feeling, even though he feels at the time that he really would do the same things again or that while in that emotional condition he has decided that certain things are all right. We will go into this phase of the subject later.

We have decided that the term "sin" will better serve for the purpose of the discussion than "crime," not for the purpose of making a religious discussion at all but rather to have fixed in our minds that crime is only one form, and an indefinite one at that, of sin and that sin covers all wrong doing. There are five distinct classes of sin:

First. Sin against self.

Second. Sin against one's family.

Third. Sin against friends.

Fourth. Sin against the commonwealth or nation.

Fifth. Sin against society at large.

Let us take these different forms of sin each under its own title.

FIRST.—SIN AGAINST SELF.

Let it be firmly impressed during the entire discussion that *sin is a deviation from the right!* Therefore anything that will be against the best interests of self will be a deviation from the right and will of necessity be sin. It is logically true that every human being has the right to have a certain amount of enjoyment during the lifetime. It is not necessarily true, however, that he should have this without paying a price for it. That would be truly a selfish view of it and selfishness should not be in the list of attributes of a real, true man. It is also logically true that each human being should try to attain the highest development of which they are capable. Any failure to attempt to obtain what is due to self either enjoyment or of attainment is not doing the best for self and is not doing the right thing and hence is a deviation from the right and consequently sin. It is also logically true that all things whether they be living or dead are of more value when pure than when they are adulterated. Therefore, that is true of man and his character and anything which will make of less value or pollute the life of an individual is a deviation from that which is right and therefore is a sin.

Having made the above statements let us go a little further and inquire as to what are some of the common sins against self and the reasons for some of these sins. Some of the sins against self are:

First. Egotism.

Second. Uncleanliness.

Third. Lack of self-control.

Fourth. Bad habits.

Fifth. Associations of the wrong nature.

Let us discuss each of these forms of sin against self in the order above enumerated.

First.—Egotism.

This is one of the most prominent forms of the sins against

self with which we have to deal. It is always well to have a just conception of one's self but to overestimate it will only result in disaster in the end. It is always unwise to hold any view that will not be substantiated, for when put to the test, if not correct there will be failure. To blind self to the true facts in the case or to one's own limitations is just as foolish an action as that of the ostrich when it hides its head in the sand thinking that because it cannot see the pursuer that it is safe. It is very well and right to have a reasonable confidence in one's ability, but not to overestimate it. The egotist has an unreasonable conception of his position, value or power in the world which is not based upon the proper consideration of comparative values. There are several reasons for the possession of egotism. One of these is *ignorance*. Let us illustrate—a person may have been successful in a rural community and when removed to a city may fail to realize that the position he holds in the latter place is not that which was held in the country and if he fails to realize this fact he will not make a success in the city. This is true in many other walks of life—a man may excel in some lines but that is no assurance that he will even be average in another. There is another cause for egotism and that is the over-estimation of one's true value. There are many people who have good traits but who overestimate them. Then there is the purely selfish egotism and this is the result of *cultivation* of the idea that one is better than another. In other words, they have forced the opinion upon themselves first and later upon family and friends that they are the superior of those with whom they come into contact. This selfish egotism may also be due to the pampering of parents or it may be due to the mis-direction of the forces that go to make full character upon the part of each individual concerned.

The reason that egotism is a sin against self is that it is the duty of everyone to do the best that they are able to do with life and to accomplish what he or she is able to accomplish and if the powers that are possessed are over-estimated there will be failure to accomplish what was in the first place attempted. It is always a credit to be able to get done what one is able and fitted for, but to undertake the wrong thing or even the right thing in the wrong way is to assure failure, and failure is not the best thing to have happen in life. It is the duty of everyone to do what he or she is able to make a success in life,

but to deliberately over-estimate is to deliberately spell disaster. The egotist will not take the trouble to deliberate over a thing—he knows it and therefore is accountable when disaster comes and even if it does not come he is not taking the proper precautions and in either case is not doing the best that can be done and therefore there is sin against self.

Second.—Uncleanliness.

Dirt has been defined as being misplaced matter, so if sin is a deviation from the right, misplacement of anything must be a departure from what is right or it would not be misplacement and hence is a cause of sin. It is for the best of everything for it to reach to its highest and best development and dirt will, of course, be a hindrance to such a possibility. The effect of dirt upon anything is to make it less attractive and of necessity of less value. There cannot be an admixture of filth and cleanliness and the result be a good one. In the organized body misplaced matter is always a detriment to its best progress, for it will hinder metabolism in many ways, if in the food it will hinder digestion, if in the air, the lungs will become affected, if on the body there will be interference with the proper functioning of the skin. Every part of the body is in close touch with all other parts by means of the nervous system and as the skin especially has millions of fine nerve endings, filth will, of course prevent the best performance of the functions of the skin, in many cases affecting some internal part and even the brain. Hence, the effect of dirt upon mentality is a direct one. The thoughts of an unclean person will become of a lower nature as a direct result of personal uncleanliness. Even in the average person the mere act of taking a cleansing bath will make one feel brighter and more cheerful, and more like taking up intellectual work. The reverse, of course, is true as can be seen at any time in the neglected neighborhoods. Impure food is also a form of uncleanliness and will, of course, affect the digestion and it is wonderful the effect that indigestion will have upon the morals and actions of a person. It has been stated and can be demonstrated that you may tell to a great extent what a person is by the mere watching of what and how he will eat. There is also to be taken into account the cleanliness of certain parts of the body, Take, for instance, the genitals—it has been proven time and again that nervous and even criminal conditions have been the result of unclean condi-

tions of the "private parts." The masturbator in both sexes is materially helped in the practices by the accumulations that should not be causing irritations and consequent improper actions and associations. The bowels, too, are frequently clogged up and that is certainly an impure condition. Many cases of serious nature from a neurological standpoint will be traced frequently to some inactivity of the bowels. Therefore, personal cleanliness, especially about the genitals and bowels can be given as the cause of many a mental condition that should not be and as this can be avoided it is wrong and therefore uncleanliness is one of the causes of personal sin.

Third.—Lack of Self-Control.

The control of anything is only gotten by a conscious effort. Exercise, either physical or mental or spiritual, is the way in which development is secured and it implies that there must be a growth and conscious result. The growth is so gradual that there is nothing very noticeable until there is a result known and then there is the consciousness of power. The brain is the mighty director of all of our conscious efforts and can overrule even some of the unconscious movements at times. It is the commander, as it were, of the army, for is not the body a complex thing composed of various parts with various functions as would the different divisions of the army be, the different organs being widely diversified in structure and function but all working together for a common result? Self-control will be developed little by little and should be commenced in childhood—the little one being trained to overlook disappointments and not to always insist upon having its own way; to not be selfish; to bear pain and other things will be met with later on in life in the proper manner. The teaching if done quietly and through training and games will not be obnoxious to the child. The child who has not had such training will when it becomes older demand more than its share and will be unreasonable in one way or another. The hysterical person is one who wants his own way and will leave nothing undone to get what he wants. He is not always conscious of the fact that he is selfish and frequently appears as a martyr, but nevertheless he is seeking for what he wants. Failing in the ordinary way to get what is wanted such a person will sometimes even go to bed, hoping in this way to get sympathy and obtain their desire. The boy or girl who has not been taught or who has

not taken the lessons to heart about the control of the emotions will very likely live to see the day when that fact will be a source of sorrow, for murder and other crimes are the result of an action that has been caused by loss of control of the higher and better part of the nature of man. Self-control is only obtained by continued and conscious effort, and hence if not started early in life will hardly be expected to be a fact in later years. Lack of self-control is a sin against self because it results in the individual being a neurasthenic or a criminal. As it will result in no good it must be a departure from the right and consequently a sin against self.

Before passing to the next topic let the statement be made that games are the best means of imparting a sense of fairness to others and limiting action of each of the participants to a certain extent, hence the necessity of the proper games being a part of the life of the young as well as of the old. Self-control is exercised unconsciously in the adhering to the rules of the game.

Fourth.—Bad Habits.

Habits, good or bad, are the result of repetition of the same thought or action until it becomes a tendency upon the part of the person. The nervous mechanism of man is such that the more frequently an impression is made upon it, the more easily will the same impression be received the next time and the same with motor nerves, the more frequently the action or thought is made the easier it is the next time and if still continued it will become so much a part of the person that it may become practically reflex and will be indulged in without any conscious effort. A person indeed *clothes himself with the habit of action and thought as well as with clothing to cover the purely physical body.*

It is needless to say that habits may be of good or of a bad type, but as we are dealing with the sins against self, we will only take the bad into account in this discussion.

Anything that is repeatedly done that will not be for the best in effect upon mind or of body will form a bad habit, thus a manner of speaking, walking or eating all will be shown in our habits. The manner and frequency of bathing and taking care of the body otherwise: the frequency and conditions under which sexual congress takes place is having its effect upon the mind and body: the constant application or the lack of it to

studies or vocations: the frequency and kind of entertainment that a person will indulge in: all of these things will have their effect upon the character of the man or woman and thereby control much of the after life. This is not a statement to be treated lightly. An impression will actually "wear" a path to the nerve center by being repeated and the path is easier and easier to travel each time and may be compared to a path that streams wear to make the bed of the creek or river so that they will have an easier method of getting to their final outlet. Just as in the case of the streams there will be difficulty in changing the course of the paths *after the paths have been worn*, there will be difficulty in breaking up a habit for there will be a mental as well as physical antagonism to the endeavor to break up the habit. That will account in a great measure for the fact that when a habit is broken there will be an unpleasant feeling for a time upon the part of the individual. It is far easier to continue in the old way.

Fifth.—Associations of the Wrong Nature.

There are various kinds of vibrations that are produced by cellular activity and there is undoubtedly a certain amount of electricity in the individual cells so there must be some degree of electrical force in the entire body. The associations of people will determine to a great extent what they will be and are. Unconsciously we are led into doing the things that are our associates do, and we are making impressions upon them and they upon us. We are in reality a part of all that we have met. The association with other people of good habits will tend to make our habits good and vice versa. But there is still another form of power that we have not thoroughly recognized up to date, and that is the sub-conscious power that we hold over each other. We are absorbing vibrations from other sources that will tend to make certain impressions upon us without our real knowledge. This is evidenced and particularly proven in a given case of an acquaintance of the author. There was a certain school teacher in one of the public schools, whose personal associations were not of the best with certain women, but the children of the class did not know anything of this. The man kept discipline by sheer force of mental control, but he could not understand how it was that there were a number of things that were out of place in the role of morality in the class. He questioned about the matter and was told that it was

because he was not living the right life himself and that the children were unconsciously absorbing the wrong kind of vibrations from his body very much as the receiving station of a wireless telegraph system will receive the vibrations from another machine. After he left and took another school in another town another teacher who was perfectly moral in secret but not such a good teacher in other lines took the class and in a few months there was a noticeable difference in the behavior of the children. The difference was especially noticed in the manner of play of the little girls. Where the other teacher had to keep reproving the children for the unnecessary exposure of the legs in running and jumping, the new teacher without much reproof soon had the children so that they were more careful of their own free will and she did not have to watch them. This sort of a thing has happened time and again. It is reasonable to believe that as the body sends out certain vibrations and that as everything is evidenced by vibrations that these vibrations may be absorbed by others. There is no other rational explanation to some phenomena of action than this one. Also how can the sudden likes and dislikes that one takes to certain persons be explained? How can you explain that a speaker will hold a tremendous influence upon his audience *even before he has begun to speak?* How do we often know a thing but are unable to explain why? All of these questions may be answered by the one word "vibrations." Now here is the point in the matter of the associations that we are making or enjoying, we are affected by other people consciously and unconsciously *unless we throw out stronger vibrations than do they.* In that manner is partly explained that environment will have so much to do with the later character of us all. We are able to train ourselves to make counter influences if we will. But in the case of, say, the child of the slums, who will teach it how to make the counter influences? In the same manner are we able to explain the good influences that one may have over another. Associations are of very great importance in studying crime from any standpoint, and particularly when viewing it from the standpoint of the psychologist.

SECOND.—SIN AGAINST FAMILY.

The second great class of sin is that against the family and it is a phase of the subject which has not received sufficient consideration by the great majority of people. As a rule there is

a great deal said about the duties of the child to the parent, but until very recently there has not been much said as to the duty of the parent to the child. It is the duty of every person to do all that they are able to do for the betterment of their family and to fail to do this to any one or all of the members of the family is failing to do that which is right and according to our definition a form of sin. Too frequently the parent tries to impress upon the child its duties toward its mother and father, but dear friends, suppose that you were compelled to go to a certain place and live under conditions without anything being said to you, and then you would have imposed upon you certain duties, how would you feel about it; That is just about the state of the average child. Millions of males and females, married and unmarried, have sexual association for the purpose of gratifying their passions and the result is in the due course of time that a child is born. That child is born in lust and for the sex gratification was it made. Now that child has not had any say as to the conditions under which it was conceived or born, nor the kind of parents that it has nor in fact anything at all, and it must simply take whatever lot in life it was born into. Yet the average parent teaches "Duty" to that very child. It is the parent that has the duty to perform—not the child. Of course the child has an inherent duty toward its own blood that every member of a family has, for if it does not do all that should reasonably be expected to preserve the peace and comfort of its own blood it has not done its full duty and has therefore sinned against the family, for each member of the family has the same blood flowing in it and not one member of it can be injured without all being injured in some way.

THIRD.—SIN AGAINST FRIENDS.

In the matter of a family nobody has a choice as to whom they will have in the connections excepting the one contracting the marriage, but in the matter of friends there is ample opportunity to make a choice. The whole process of selecting friends is one where there is the utmost latitude. A friend is made such by the conscious actions of each one concerned and there is a *selection* of the one or ones desired. As they are chosen there is a certain amount of duty that we have toward them because of the fact that we have voluntarily made the choice. A companion is not necessarily a friend, but one

whom you have selected from a number and given confidences to is a friend and there is a certain amount of expressed or implied obligation to that friendship. Friendship is a soul association and therefore on a very much higher plane than that of family and the breaking of obligations made by virtue of that state of association is a sin against friendship. The breaking of the obligations may be due to neglect, thoughtlessness or purpose, but nevertheless it is a sin against them. It is not always the best form of friendship to do what the other parties will want as true friendship consists in the doing of what is best for them. In the matter of friendship there is a great deal of good done by setting an example and failure to set a good example is a failure toward the duty and hence a sin against the friendship.

FOURTH.—SIN AGAINST THE COMMONWEALTH OR NATION.

The nation or commonwealth is simply a large family as it were and there are inherent things that are to be remembered if we would do our duty. It is necessary in the nation as well as in the home to have rules and regulations and urging the proper carrying out of them. These rules and regulations we call laws and are for the benefit of the individual as well as for the mass, and it is the duty of each and every individual to use all of the influence that they have to see that proper and just laws are passed and carried out in the best manner possible, and any failure either by default or by intention is a sin against the nation. Anything that will disturb the peace, or fail to preserve it, or that would affect in the improper manner any legitimate business would all be wrongful. The nation should always be thought of as a large family and there should be applied the same general rules as to the individual family amplified to meet the conditions. Sins against the nation consist in the *avoidance* or the *breaking* of any regulation and as above mentioned, the failure to make the proper laws. The smuggling of goods, the doing of an illegitimate business, failure to pay taxes or to vote or to neglect to take part in the necessary management of the nation are all forms of sins against the nation.

FIFTH.—SINS AGAINST SOCIETY AT LARGE.

All of the aforementioned forms of sin from the personal ones to those against the commonwealth or nation will have

bearing upon the last and really greatest form of sin—that against Society-at-Large. It will be this form of sin that we will deal with more fully than any of the others in the present discussion. Personal sin and that against society will of course run hand in hand. By the term “society” is meant that collection of people in the world over that are representative of the truest and best manhood and womanhood. The laws of the commonwealth and nation only handle matters that pertain to the actual necessary conditions to maintain society in decency. There are other sins, however, that it would be impossible to bring under the realm of the legal laws, although the results of such sins will, of course, be the cause of much legislation at times. The legal laws call the departures from the right (according to the views that society considers as right) different names according to degree, these terms being “misdemeanors,” “felonies,” and “crimes,” but as was said at the outset these degrees are all matters of opinion, while the fact that they are departures from the right is accepted the world over, the extent of the importance of each, however, not being considered in one place as it is in another. Some of the most common forms of sin against society are arson, theft, rape, malicious mischief, slander and murder. Let us look into the causes of each of these a little.

First.—Arson.

This is the setting of fire to a place. There are cases where the desire to simply see something burning is so great that the person will lay to one side all of their ideas of right and wrong. Other cases are those where there is malice or intention to gain by means of the fire. Still other cases are those where insanity exists.

In a case of arson even though the party is considered insane they are as a rule responsible for they know the nature and the consequence of the act. Therefore it is a sin against society.

Second.—Theft.

There are various reasons for theft. Real necessity is one of them and such cases are very sad. But even in the case of real necessity often the state of necessity existing has been the result of the former method of living of the person. Then theft may become a disease with a person, just as anything

else, by continuing to do the stealing without letting the conscience affect the person. The easier that the sin is accomplished the one time the easier it becomes to do the same thing the next time. The kleptomaniac is one who has either lost control of their conscience, never had control of it or has buried the conscience altogether—in other words, the kleptomaniac is conscienceless as far as stealing is concerned. It is in some cases a reversion to the monkey type of man where the article is taken for no evident reason whatsoever. Then there is the professional thief who steals because he has made it his occupation or mayhap he has a grudge against society. He may have an inherited *tendency* as well as any other inherited trait. The measure of sin in theft depends upon the cause of the taking, the mental development and training, not forgetting that in training each person is to a certain extent personally responsible for the training and the applications of it. The thief is not always a coward, for many times he will risk his life, but strange to say the more intelligent the thief the more cowardly he is, thus take the measure of bravery required to hold up the railway train as compared to that required to abstract funds from a bank. The thief may have latent qualities that have never been appealed to. Sometimes, as in all sin, he may have hardened his heart and in such an instance he is entirely responsible.

Third.—Rape.

The causes of rape are numerous and would form the basis for a lengthy article on that topic alone. It is not true that rape is the result of Lack of Knowledge, but it is true that it is frequently due to the results coming from the knowledge obtained from the improper sources. It is sad but true that the average school child knows more than the average parent would care to tell to the child. They have gotten the training to be sure, but where? In the present age there are so many other things that are taking the interest of the average parent that the child is permitted to shift for itself and too it must not be forgotten that the average child is getting a far better education than the parents enjoyed and the parent is losing the disciplinary control of the child in many cases just from that reason. It is very true that in the cases of little girls the desire is just as great upon the part of them as in the case of the offender. In considering the psychology of rape there must be

borne in mind the amount of sexual intercourse that the offender has previously had: the stoppage of it in some cases (as in the case of a widower): the physical and the psychical condition of the offender and the offended: and lastly the possible effects of drugs. In the case of the criminal negro rape is a terrible desire to relieve a passion and frequently would not happen if the negro could do as the white man—go to a house of prostitution or select a pretty girl. The white man is permitted to flirt and find a sex-mate for the occasion where the black fellow cannot. The author does not approve of prostitution but wants to draw attention to the fact that this condition does exist. Rape is a terrible combination of the physical and the psychical sides of man and should receive much study. The sex impulse is the one great inherited impulse in life and should be guarded and guided.

Fourth.—Malicious Mischief.

In such cases there is an act committed which may cause damage and yet there may not be the degree that one would call it criminal intent, as for instance a boy may throw a stone at a window and break it and run. He may lay a banana peel on the pavement or tie a tin can to the tail of dog. What is the working of the mind in such a case?

The average boy has not absorbed the fact that he has a personal responsibility to others. He may have been *taught*, but teaching does not count for very much unless the teaching has been *digested*. There is a certain amount of animal instinct in all youth that must be directed or governed. The boy who will throw the stone is not the one as a rule who is brought up in the house of the highly cultured for such an one would not make his hands dirty by picking up the filthy stone out of the road. But do not misunderstand me that the highly cultured boy has not just as much of the animal in him, for he has, but he will evidence it in other ways, such as being mean and lording it over servants, etc. He will not dirty his hands, but his soul is no cleaner than the negro for that matter. The animal instinct, if not governed will run wild just as will an engine that has been started without its engineer and there is no governing hand to guide it. This is a good comparison to my mind.

The engine may run along all right even without the engineer to guide it but all of a sudden it will give a lurch or do

something that will evidence the fact that all is not right. That is just the psychological condition of the boy when without rhyme or reason he will do some of the things that boys will do. According of course to the degree to which the boy has been instructed and given the opportunity to direct the animal passions, the more or less will he be inclined to be maliciously mischievous. The same applies to man as well as to children. Of course as the individual becomes older the intent to do right or wrong will grow more and more fixed. According to the law though malicious mischief is not actual crime—it is a lesser thing.

Fifth.—Slander.

Really this should come under the topic of loss of self-control for in slander the tongue simply runs loose. There may be the intent to do a damage or it may simply be the repetition of something that has not been truthfully carried. The mental attitude of the person who is given to slander is venomous. The slanderer is one who will not come out into the open and the whole process to the mind of the author is really more “criminal” than the one who will commit assault or do other personal violence.

Sixth.—Assault.

In the case of assault the beast nature shows itself. There is a development of animalism that should be under the control of the will but which the one doing the assaulting has not brought under control but he is deliberately directing it against another and sometimes without any personal venom, although at others there may be hatred. Assault is simply a stepping stone to other more vicious acts such as rape and murder, and may even be part of the method by which they are accomplished. The mental attitude is to do bodily damage to another.

Seventh.—Murder.

Murder is the deliberate and intentional taking of life of another human being, knowing both the nature and the consequence of the act. It must be deliberate to be considered as murder. Murder is considered by society as the sin or crime that deserves the harshest of punishments. It is purely bestial in character and is due to two things: 1. Loss of natural control with hatred as the basis. 2. Absolute control as the

result of training to wrong thinking and acting. In either case conscience is set aside in murder.

Having thus discussed the subject it is well for us now to turn to the matter of responsibility. In determining the responsibility of a person it is well to consider the following:

First. Psychological and physiological prenatal influences.

Second. Physical conditions of the case after birth.

Third. Environment.

Fourth. Teachings and influence (mental, moral and religious).

Fifth. Possibility of hypnotic influences.

First.—Psychological and Physiological Prenatal Influences.

Psychologically there is a tremendous influence exerted upon the human being long before they are born (see "A Study in Psychology" by the author). The mind of humanity is a material thing that is being acted upon by all impressions which it is able to receive either consciously or unconsciously. Every influence leaves a memory impression in some manner upon some part of the nervous system and these impressions affect the whole life of the person it is needless to say, for our whole conception of life is due to the influences that surround us and our interpretation and use of these impressions. A person having nothing but pleasant impressions made upon the brain or nervous system will, of course, be a pleasant person and the one having the reverse kind will probably have a tendency to be of a "cranky" nature. These impressions made upon the individual may be likened to the waves that are the means of transmitting the wireless telegraph. Of course, an individual can originate strong wave currents of himself and may overcome those which are striking him and in such a case the person may fail to receive good impressions even when there are such, and, on the other hand, may keep out bad ones by exercising his nervous powers. Whether the waves be incoming or outgoing they will leave a permanent impression upon the system whether one is aware of it at the time or not. If this be true the question arises: "If these impressions should happen to be made upon the mind with no willingness upon the part of the individual, how much is that individual responsible for the successes or failures made?" I have reference right here to the impressions made upon the child while in-utero. One born of criminal parents would more than likely have a

criminal tendency. However, there is one good thing and that is that everyone is an individual and if they realize and will exercise their individual powers they are able to throw back the bad impressions that may be coming along these waves. Is it any wonder that children at a very young and tender age will show vulgar tendencies when the great majority of them are the result of lasciviousness or worse, licensed prostitution or so-called marriage?

It is needless to say that a physical condition will be likely to be handed down to the child if such condition exists in the mother before the birth, so we will not go further in that line of discussion.

Second—Physical Conditions of the Case after Birth.

As the growing child must learn by experience and experiences in the early period of babyhood are first physical and later psychical it is very important to note some few facts about the possible psychical effects that physical conditions will have upon the child. Let us take a few. A mother will perhaps have an altercation with her husband and shortly afterward nurse her baby. In the course of an hour the child may have convulsions and perhaps die or perhaps live, but the result of the anger of the mother has *affected the central nervous system of the child*. In nursing children, mothers will frequently let them handle the breasts and play with them. This is just laying the foundation later on in life for other liberties with the mother and of others. Why how frequently will a baby who has just been nursed and cannot possibly be hungry and yet be old enough to be cognizant of things try to play with the breast of a man? To permit the fondling of the breast unduly will be the forerunner of graver offences. That is one reason that a child should be weaned from the breast in a reasonable length of time after birth. Neither should we be prudes in certain matters for it is well that children should have all sufficient knowledge and *at the proper age* be taught to even enjoy the beauties of art. Children if not taught that it is improper to handle any part of the body without reason will have to suffer later on in life for very bad cases of masturbation are often the result of innocent handling of the genitalia.

Third.—Environment.

The next in order will be the influences of environment upon

the mind of the child. Good definitions may be found in the dictionary but the author feels that it may be described as the condition in which an individual finds himself similar to the one when a boy falls into the river—he is surrounded by many things over which he has no control but he can swim to the shore and get away from these things (in this case the water and in life the many things that almost swamp us at times), *providing that he has been taught how to swim*. In the case of the one who is unable to swim or has not received instruction, who is responsible? All teaching of a child that is not sincere will fall short of the effective in the broad sense of the word. We are responsible in a measure later on in life for our own environments and always for that of our offspring. As teaching will of necessity be part of the environment of the child let us mention that just a little now.

Fourth.—Teachings and Influences, Mental, Moral and Religious.

Teaching consists in the imparting to others a knowledge of the subject in hand. A teacher must be very sincere in all lines or as I stated before much will be lost. The child imitates the teacher more than either teacher or pupil realizes. We teach children by our own lives far more than we can possibly do in the school room or even at the study table in the home. The moral and mental state of the child will to a great extent be determined by associations until the child will think individually. There are three distinct forms of teaching, physical, mental and moral. Let us glance at them each a moment.

Physical Teachings.

In considering the psychology of crime one should always remember that a person is not entirely responsible for the sin or crime unless he or she has been the recipient of some physical knowledge. There are a great many physical conditions such as phimosis of clitoris and penis and other malformations that will be the occasion of many a sexual sin and even others. Food is another important factor to be considered in dealing with crime or sin. Food will have its effects upon many parts of the body. Therefore care should be taken in the diet arranged for the growing child and afterwards the adult. Certain foods which we will not have space to discuss will cause certain desires in the person, pepper being especially one that I have in mind at the present time.

Mental Teachings.

If there has been no effort to direct the mind of a child, of course in later life there is not the full responsibility that the given person would have as compared to the one who had received the proper teaching and example, but with every human being there is an innate feeling of the right and wrong and therefore we are all more or less responsible to our acts for we certainly know the nature of them. Children should be taught to use their minds not as automatons but as *individuals*.

Moral Teachings.

Certain good truths may be taught and yet the wrong application be made of them. The instructor has not finished when he has taught. He must *live* his teachings. The failure of many persons to teach in the highest sense is the cause often of the misdirection of much of the energies of the growing generations. One good way to get rid of the excess energy that all healthy young folks have is to have good healthy sports in moderation. That, while a purely physical teaching of itself will be a great factor in the morality of the individual.

HYPNOTIC INFLUENCES.

It may be well before closing to call your attention to the fact that man has what the psychologists call two minds: for the convenience of discussion, the objective and the subjective, the objective being governed by what we perceive with our physical senses (ears, eyes, etc.) and what the subjective mind makes it do. The subjective mind is the true mind of the person and it in turn perceives through the objective, and after a time the persistent impressions that the objective mind makes upon the subjective become a part of the subjective and become permanent. Thus an idea that is implanted in the subjective mind remains under all ordinary circumstances. It is the subjective mind that has the perfect memory and will govern the acts of the individual. It is the object to overcome the *subjective* mind in hypnotism. If the subjective mind holds a definite view and resists the mind attempting to hypnotize the person cannot be hypnotized. In other words, even in a case that is hypnotized a given principle will not be overcome. Take as an example a man who has subjectively decided that drinking alcoholics is wrong, even though that man be hypnotized he

will not drink liquor of that nature and in fact frequently a suggestion adverse to the principle of the individual will bring him out of the hypnotic state. The only way to overcome a principle is by the use of the objective mind and to get the person by degrees to change his or her convictions, and in such a case there is no necessity then of using hypnotic influence. Just here is where the application comes in when applied to sin or crime. A man or woman may claim that he or she has been placed under a "spell" by the other and hence the committing of a crime or the performance of an act or deed. If the said act were a real *principle* with the person in question no hypnotic influence could have compelled him or her to have performed the said act. Therefore, all such claims should be discounted. Before a person has made a certain thing a positive conviction then of course undue influence may be exerted, but then the *character of the person has not been altered for all persons of good character will have strong convictions*. If the person will claim to have a mind means that he or she has the possession of consciousness and can exercise a choice, so either the one in question when claiming hypnotism is without knowing it, admitting that he or she has not fixed or settled convictions about right or wrong or they are admitting by the act that the mind is weak and therefore incompetent. If this were to be more fully impressed upon the mind of the public and profession there would be fewer claims made of hypnotic influences being used for the performance of certain wrongful things.

CONCLUSIONS.

It may seem strange to you as a body of physicians that a paper of this nature be selected, but we as doctors should be the ones to decide as to the mental states of criminals and those accused of being such, and as there are various degrees of crime recognized as being the results of disease, and as there are medico-legal questions which we are called upon at times to decide as to the measure of the responsibility, such as rape, prostitution, murder, etc., and as the matter of eugenics is coming to the front and but comparatively few physicians taking an active part in disseminating the proper information, and as the author hopes he has shown something valuable about sin or crime, I feel justified and not only justified but called upon to call forcibly to your minds as well as the medical fraternity

generally what crime is, and that in every given case should be borne in mind the main facts as we have enumerated them, and especially as to *responsibility*.

PARANOIA.

BY

WESTON D. BAYLEY, M. D., PHILADELPHIA.

(Read before the Oxford Medical Club.)

A RECENT review of my private records of insane patients (the accumulation of a quarter of a century), brought into recollection a large number of paranoics; and while this type of mental alienation is less common than some others, yet it is met with sufficient frequency by the general practitioner to make it a problem of interest and importance. Indeed, from its very characteristics, paranoia often assumes a role perplexing enough to those who by reason of greater experience, are more familiar with its subtleties.

The concept of paranoia, while it includes a definite type of easily recognized morbidity, hovers much around the undefined borderlands between sanity and insanity, including a class of eccentric, queerly acting or thinking persons, who yet do not cross the empirical line to be adjudged actually insane. In fact, considering the tentative nature of the current definitions and classifications of insanity, one might say that paranoia lies on the borderland with an area extending into the depths of most dangerous and incurable alienation. We cannot measure the step from systematized eccentricities to systematized delusions. Even the delusions as such, may be of a nature related to possible or probable realities, and these may effectually deceive the unwary into a belief in their verity.

Paranoia, then, "is a chronic, progressive psychosis, occurring mostly in early adult life, characterized by the gradual development of a stable, progressive system of delusions, without marked mental deterioration, clouding of consciousness or involvement of the coherence of thought." (Kraepelin.)

The paranoic, in most cases, inherits a neuropathic constitution, in which the abnormal mental state may be directly transmitted or else the inheritance is a diminished capacity to with-

stand stress. Many manifest the stigmata of degeneration—such as odd-shaped or assymetric skulls, abnormalities of the ears, et cetera.

A retrospective study of the life history of the fully developed paranoic usually shows morbid peculiarities dating back into childhood. From an early period they “were different from other children”—they are often described as having been peculiar, moody, morose, uncompanionable, cruel, distrustful, oversensitive, eccentric or subject to strange ideas. Indeed, these same idiosyncrasies may persist through life without any further reduction, and the abortive paranoic be never recognized as such. Others from some stress—either intrinsic or extrinsic—such as puberty, privation, traumatism or without obvious cause, develop the progressive form of the disease. In this it is noticed that the individual becomes depressed, anxious and suspicious, often becoming morbidly hypersensitive to certain persons in his or her environment. Of these they conceive ideas of grievance; and there is the growing conviction that they are the objects of unwarranted annoyance, conspiracy and persecution.

From my records there is brought to mind a large number of cases of insane jealousy, the subjects being mostly women, and it seems more than a coincidence that they were in nearly all instances the wives of men of highly moral and upright character. Such patients may appear entirely normal in every respect until one touches upon the eternally recurring subject of their husbands and other women, and here their imaginings know no bounds. One such case, thus persecuted by a woman who had no existence outside of jealous delusion, recently tried to commit suicide by repeatedly jabbing a hat pin in the region of her heart. This produced an active pulmonary hæmorrhage, but she recovered. Another case of Dr. Abbott's, and known also to Dr. Wilcox, has continued her frenzied attack on a patient and splendid husband day and night for years, concerning a girl he knew once in a business way and has not seen for years. A similar case was referred to me by Dr. Izard. In another case—that of a man of brilliant attainments—the accusation against his wife was of improper relations with her own younger brother, on evidence so absurd that it would at once convict the husband of lunacy. This patient had other paranoic manifestations.

The more typical paranoia, however, is manifested in the de-

velopment of pure delusions concerning persons accidentally in the patient's environment, these delusions being persecutory in type, and the systematic building of modes of thought and action on these delusions as if they were verities. The nature of these delusions depends upon the degree of education of the patient, upon temperament, upon accidental association and upon chance coincidence. Thus in the case of a wife of a prominent Mason who was absent from home for a long time on business, in spite of the fact that she protected herself by wearing Masonic regalia, she was annoyed by certain Masons who by a "mental process," "put snakes in her room." This also was a patient of Dr. Wilcox. Another case of a girl of 17 is annoyed and persecuted by certain street car conductors who want to prevent her from going from her home in West Philadelphia to her place of business in the city. She noticed one day on crossing the bridge, the river was low and she is convinced that they are scheming to pump the river dry, so that she cannot return from work. A man, 31 years, patient of Dr. Layman's, walked the streets at night with a hammer and a club to protect himself against his persecutors. He saw a boy with some telephone wire and is convinced that he must have been sent to fasten them to his house, because mysterious and annoying messages are sent to him at night. Members of his family poison his food, and a certain "clan" is trying to rob him of a small property. A very homely lady of 45 is much annoyed by the voices of people who come to her room at night to take parts of her away in order to beautify themselves. A certain lady has thus taken part of her face so that she can model her own like it. On all other subjects she is entirely logical. A woman, aet. 63, patient of Dr. Roman, has telephone voices in her ears—she recognizes voices of her neighbors—these call her vile names and accuse her of being a harlot. She has moved several times, yet the voices recur. Miss M., 49, a brilliant literary woman who writes cleverly and is widely known, frequently changes her residence because the Catholics are after her and soon "track her up." They want to put her in an asylum. A patient of Dr. Supplee has delusions of certain people who must be trying to annoy him with a massaging machine which they in some manner put on his neck at night. This delusion probably has origin in a tactile illusion—possibly a cervical pain. His father is a paranoic. Another case seen with Dr. Keim, got into a row with an astonished neighbor.

whom she accused of "putting a spell on her" which disturbs her at night. Al Shields, Geo. Graham and Judge Sulzberger are in conspiracy with the woman opposite—and they annoy her greatly by hypnotic voices. An old man in the Masonic home brought me at different times towels, tobacco and samples of food, and showed me a place in his gold headed cane in all of which poison had been concealed by his enemies. Both of these cases are good talkers and consecutive thinkers on all other subjects. The nocturnal telephone cases are very common. Of more recent years since the advent of psychical research we have a number of people who are annoyed by telepathic methods. The editor of a paper in a nearby town has elaborate telepathic annoyances at night which he has vainly tried to overcome by various devices, finally appeals to me to come and investigate him for the benefit of the S. P. R. and incidentally try to counteract these subtle annoyances. Another man has telepathic messages, and even telepathic reproductions of people who thus come to his room and have sexual intercourse in his presence. He has warned them to cease annoying him and intends to proceed against them. Another patient who regards me as the persecutor, inasmuch as I send her "telepathic images of an obscene character" at night, destroying her sleep, has begged me to desist, and finally finding me obstinate and persistent has made dire threats against me. In all other respects she is normal, educated and capable. I could thus continue quoting the salients of many records, but the principle is all the same. Delusions of being persecuted by friends, neighbors or strangers. Pleading that these be discontinued; anger and threats because they are not; and occasionally a tragedy.

On subjects other than those of the delusion, these paranoids appear entirely competent. Memory, judgment and action may all remain normal, and I know of paranoids who have done good, even brilliant work in their ordinary lines of occupations for years.

Ultimately, however, there comes on a transition. Always inclined to be self appreciative, they begin to think they are persecuted only because they are really great and important personages, and then comes the change from delusions of persecution to delusions of aggrandizement. They become special agents of the Almighty, inventors of impossible machines, and great personages.

The diagnosis of paranoia in the typical developed case should not be difficult. It is only in those instances when the delusions follow along seemingly plausible lines, that we may for a time be perplexed. Some paranoics conceal, deny or explain away their symptoms in a manner cunning enough, when they are under medical or legal observation; and we have the professional handicap of knowing that such cases are medically but not legally insane.

The paranoid form of dementia præcox is of more rapid development, and there are apt to be hallucinations from the start. The delusions are fantastic and the emotional tone weak and silly. The concurrence of symptoms of dementia will usually serve in the differential diagnosis.

Paresis may at times bear a superficial resemblance to paranoia, but its rapid development, its expansive delusions with emotional weakness and the somatic symptoms serve to differentiate in cases of doubt.

In some cases of melancholia there are persecutory delusions, but these are not systematic, the subjects are self-accusative rather than egotistical and the mental operations of the patient are more or less confused.

Alcoholic pseudo-paranoia may simulate paranoia, and it must be remembered that the true paranoid may also be a drinker. The delusions are frequently of the type of jealousy and accusations of infidelity on trifling, absurd and insignificant grounds; and these, while persecutory in type, are more confused than systematized. Visual hallucinations which are rare in true paranoia are common in the alcoholic variety. Cocain pseudo-paranoia begins acutely, develops the hallucinations and delusions often of the jealous type, or with general ideas of persecution. The history of the drug, the pallor and wasting, the dilated pupils, the sensation of small objects under the skin (tactile hallucinations), the quantities of floating spots which may be visualized as bugs, flies, etc. (visual hallucinations). The rapid course and subsidence upon withdrawal of the drug are diagnostic.

The prognosis in paranoia is not favorable. There should be some medico-legal amity whereby these cases could be committed early to suitable institutional care, but this is not the case now, because unfortunately the courts are not prone to recognize as such anything short of a roaring lunacy. Early and continued institutional care and well chosen psycho-therapeutic

treatment might change somewhat the very unfavorable outlook in this disease.

The treatment should always be institutional excepting perhaps where there is unlimited means to provide in a permanent way every possible safety for the patient and those about him. Ordinarily the treatment must be planned on the custodial, rather than the curative basis. These lunatics are exceedingly dangerous, and there are many of them at large who should be permanently in asylums.

KEYNOTES OF REMEDIES AND OF PERSONS.

BY

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(Read before the Twenty-third Ward Homœopathic Medical Society of Philadelphia, Pa., February 18, 1914.)

NOWADAYS we frequently hear such expressions as "do so and so, or so and so, and also give the indicated homœopathic remedy." The leading idea too often appears to be to first "do so and so," frequently as recommended by some empirical prescriber, and only incidentally to "give the indicated remedy." Whereas, we should always remember that we are exponents of homœopathy, and that as worthy representatives of this system of therapeutics it is our bounden duty, first, last and all the time, to painstakingly study the case from its every standpoint in the most exhaustive manner, using every appropriate modern method of diagnosis, and then administer the similar remedy, after which if we can suggest some adjuvant treatment which will render substantial service without interfering with the indicated remedy, it is time enough then to do so; but in every instance the indicated remedy should receive precedence over all other methods of drug medication, except only in those rare cases of chronic or incurable disease where palliative or mechanical measures are deemed alone advisable, as distinguished from legitimate attempts at curative results.

We should carefully apply to every case the principles of correct hygiene, and protect our patients by the most favorable environment, diet, rest or exercise as each individual case may require, etc., etc. These therapeutic factors which should always be invoked are measures which place the patient in a receptive condition, and invariably aid the action of the indicated

remedy, and never place any obstacles in the way of its full and complete effects.

No criticism is intended of the mechanical treatment appropriate to fractures, dislocations, or other results of accident or injury, nor to the legitimate application of surgery to non-medical or surgical conditions. Many of the achievements of modern surgery are little short of miraculous, and are worthy of all praise, but we deprecate the modern tendency to invoke surgical measures to the management of cases which are curable by properly chosen medicines.

The idea intended to be presented in this paper is to render paramount the application of the principles of pure homœopathy to every strictly medical case coming under our influence. The frequent excuse that "no particular remedy seemed to be indicated, therefore I did so and so," can almost always be avoided by a careful study of the history of the case, of the constitutional temperament of the patient, and the conditions of aggravation and amelioration which may be elicited by careful inquiry, in addition to the objective and subjective conditions presented by the patient.

We used to read in our medical journals page after page of carefully individualized indications for the use of homœopathic remedies, and the application of such indications led to the successes of the founders of homœopathy, and placed our school of medicine upon a solid foundation, the benefits of which we are now enjoying. Of late years we have too often departed from the "straight and narrow way" of our medical forefathers, and have gone a-whoring after strange medical gods, which, will-o-the-wisp like, have led us into many devious ways, to our own disadvantage and lack of success, and consequently to the disappointment of those who have placed their confidence in us. For these reasons it has seemed appropriate to present to you a paper recalling some of the landmarks of our faith, and to urge a return to the faithful practice of their principles.

As homœopaths we have the only invariable, universal, unchangeable, and scientific law of cure possessed by the medical profession, which is applicable not alone to the administration of internal medicines, but equally so to hygiene, diet, and the administration of electricity, hydrotherapy and mechano-therapy. Strangely enough and very gratifyingly, the trend of modern medical thought among leaders in the old school medi-

cal profession, in the preparation and use of the various serums, antitoxins, vaccines, bacterins and serobacterins, is plainly proving the correctness of homœopathic dogmas, and these methods merely use new terms like "opsonic index," "negative phase," "positive phase," "immunity," etc., to express the identical ideas used by homœopaths for more than a hundred years, all of this of course without acknowledgment of the source.

All of the genuine indications for the use of our internal remedies, obtained more than a hundred years ago by painstaking provings, are equally genuine and reliable to-day, which is in striking contrast with the numerous and various fads so eagerly sought after by many, only to be used for a short time, then found wanting, and unceremoniously relegated to the medical scrap heap.

Records of poisonings by drugs show their gross effects, and their administration to animals gives us a considerable amount of uncertain knowledge of their effects, largely however by inference, because their effects upon animals are often different from their effects upon the human system, and also because we can determine only the objective effects upon the animals experimented upon while we necessarily remain entirely ignorant of their subjective effects; but certain, positive, and in every respect reliable knowledge of the action of drugs in their finer shadings upon the human organism, has been developed by the homœopathic medical practitioner through provings of drugs as originated by Samuel Hahnemann, and as continued by his followers.

Provings of drugs upon the healthy human subject, revealed the important and well known fact that each drug has its own particular individuality, whereby or wherein it differs from all others just as truly as people differ from each other. These provings also show the minor shadings of these differences with unerring accuracy, and thus give us the only truly scientific basis for their selective use in disease.

Drugs are naturally grouped into families or classes by their leading characteristics, which show in a general way the tissues or the parts of the body they most affect. Similarly people may be grouped into general classes, as nervous, phlegmatic, bilious, catarrhal, neuralgic, rheumatic, etc., etc., overlapping of classes in both remedies and in persons being somewhat frequent without detracting from the desirability for comparison

of such classes, and of comparisons between drug classes and personal classes.

Long experience with innumerable verifications of many drug symptoms has led us to call them keynote symptoms or "keynotes," because they form such plain, positive and reliable therapeutic indications. Likewise oft recurring success in their application has very frequently led us to instantly recognize the individual person upon sight as possessing in his constitutional make-up a particular susceptibility to the action of some certain remedy. This I have dominated the "keynote" of the person. Have we not frequently recognized the "tall, slender person who walks stooping" as very likely to be a sulphur case, or the "fair, fat and forty" person as a probable calcarea case, or the "nervous, choleric, sedentary dyspeptic" as a nux case, or the sour-smelling diarrhoeic child as a probable rheum case, or the anxious apprehensive fever subject as a probable aconite or arsenicum case, etc., etc.?

It should not be inferred that these keynotes are certain to lead to the individual remedy; they often do so, but if not they surely do lead to a restricted class of closely analogous remedies, from which we can with certainty select a successful remedy.

We have been taught, and we constantly observe, that the mental symptoms of the patient are the most important, both in the selection of the remedy, and in our judgment of its action. For a long time I did not understand the reason why, until finally I realized that the nervous system controls all of the physical processes, that the operations of the mind are the highest type of nervous activity, and that the mind takes knowledge (either directly or through certain ganglia) of all of the physical processes. The mind, represented by the nerve centres in the brain, is the superintendent of the vital force, therefore when that force is working harmoniously in all parts of the body the mind will be satisfied and buoyant, and will be correspondingly depressed when the opposite condition occurs. How often we recognize improvement, when the patient says he feels better, before the local conditions are able to make it manifest. This is because the patient seemed and really was relieved of an incubus, and was consequently in a more hopeful condition of mind.

A prescription must never be based upon a keynote alone; it must always be supported by other symptoms or modalities,

the keynote directing either to the individual remedy or to a close analogue.

Within the limits of this paper no exhaustive exposition will be attempted, and only a few illustrative keynotes will be given, as follows:

Diarrhœa hurrying him out of bed in mornings, reminds us of sulphur at once, but if sulphur is indicated we shall find other sulphur symptoms, such as changeable color of the stools; or frothy, sour, or fetid stools; or emptiness of the stomach and canine hunger, particularly about 10 or 11 A. M., etc.

"The child dreads a downward motion," reminds us of borax, but if it is a borax case we shall find other borax symptoms, such as a nervous, peevish, fretful child, who probably has an aphthous sore mouth; or frowsy tangled hair that splits easily; or eyelashes agglutinated with a gummy exudate, especially in mornings; or unhealthy skin, etc.

Aggravation after sleep, is very likely to indicate lachesis, but if so we shall find other lachesis symptoms, such as great sensitiveness to touch, throat, stomach, abdomen, etc. will not bear the pressure of clothing or bedclothes; or the left side is principally affected; or disease begins on the left side and goes to the right side; or climacteric ailments, etc.

Rapid sinking of the vital forces, reminds us of veratrum alb., but if this remedy is indicated other veratrum alb. symptoms will be present, such as cold sweat on the forehead; or violent vomiting with profuse diarrhœa; or congestive or pernicious intermittent fever, etc.

Flatulent dyspepsia with a bloating which prevents completing a meal reminds us of lycopodium, but if this remedy is indicated other lycopodium symptoms will be present, such as aggravation from 4 to 8 o'clock P. M.; or urinary irritation with red sand (uric acid) in the urine; or lymphatic constitution with catarrhal tendencies, etc.

Great debility with restlessness and nightly aggravation make us think at once of arsenicum, but if this is the indicated remedy we shall find other arsenicum symptoms, such as burning pains; or irritable weakness; or tendency to gangrene; or injurious effects of fruits, etc.

Do we "size up" our patients as we should as they come to consult us, and form our mental estimate of their constitutional tendencies and susceptibilities? Other symptoms agreeing the robust plethoric individual is likely to need either aconite or

one of its close analogues; the nervous, excitable, sleepless person, suffering from sudden local congestions, will probably need belladonna; the subject of a teasing cough which is worse in the early part of the night, will probably require pulsatilla; the irritable, choleric individual is likely to need bryonia, chamomilla, nux or anacardium; the fair-haired, delicate, changeable, lachrymose patient, especially if a woman, is nearly sure to need pulsatilla; the fair-haired, fat subject, especially if a scrofulous child is as likely to need calcarea, especially if sweating profusely about the head when asleep; if light-haired, fat and croupy, with a tendency to stringy mucous discharges, kali bi. is probably the indicated remedy.

Further illustrations could be advanced ad libitum. This, however, is not the attempt at present, but to call attention to these numerous and reliable "finger boards" upon our medical highway, directing us either to the requisite remedy, or at least to the class of remedies from which the successful prescription is to be chosen, and in this way to add stimulation and impetus to the study and application of our materia medica.

I earnestly urge the constant study and application of all of these numerous "keynotes" of remedies and of persons with which we can make ourselves familiar, in the full belief that by doing so we can make ourselves so much the more useful to our fellowmen, and incidentally replenish our own coffers while doing so.

Of late years the brilliant advances and achievements of modern surgery, the therapeutic accomplishments of electricity and mechano-therapy, together with the agnosticism and therapeutic nihilism of the old school physician, have taken such strong hold of the medical mind as well as that of the laity, that it seems doubly important that we should return to our "first principles," and pursue a faithful and constant study and application of our priceless homœopathic materia medica, not alone through "keynotes," but using them as "finger boards" or "signs" pointing us to the "totality" of the remedy or of the person.

In this way only can we prove ourselves worthy successors and successful heirs of our medical forefathers, and fit representatives of the immortal founder of our faith, Samuel Hahnemann.

ARTERIO SCLEROSIS: ITS ETIOLOGY AND PATHOLOGY.

BY

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(Read before the Delaware and Peninsular Homœopathic Medical Society.)

As an evolution process arterio sclerosis is an accompaniment of old age, and is the expression of the natural wear and tear to which the tubes are subjected. Longevity is a vascular question, which has been well expressed in the axiom that "a man is only as old as his arteries." To a majority of men death comes primarily or secondarily through this portal. The onset of what may be called physiological arterio sclerosis depends, in the first place, upon the quality of arterial tissue (vital rubber) which the individual has inherited, and, secondly, upon the amount of wear and tear to which he has subjected it. That the former plays the most important role is shown in the cases in which arterio sclerosis sets in early in life in individuals in whom none of the recognized etiological factors can be found. Thus, for instance, a man of twenty-eight or twenty-nine may have the arteries of a man of sixty, and a man of forty may present vessels as much degenerated as they would be at eighty. Entire families sometimes show this tendency to early arterio sclerosis—a tendency which cannot be explained in any other way than that in the makeup of the machine bad material was used for the tubing.

More commonly the arterio sclerosis results from the bad use of good vessels, and among the circumstances which tend to produce this condition are the following:

Chronic Intoxication.—Alcohol, lead, gout, and syphilis play an important role in the causation of arterio sclerosis, although the precise mode of their action is not yet very clear. They may act, as Traube suggests, by increasing the peripheral resistance in the smaller vessels and in this way raising the blood tension, or possibly, as Bright taught, they alter the quality of the blood and render more difficult its passage through the capillaries.

The poison of syphilis and of gout may act directly on the arteries producing degenerative changes in the media and adventitia.

Overcating.—Many authors attribute an important part of

the etiology of arterio sclerosis to the overfilling of the blood vessels which occurs when unnecessarily large quantities of food and drink are taken. Particularly is this the case in stout persons who take very little exercise.

Overwork of the Muscles, which acts by increasing the peripheral resistance and by raising the blood pressure.

Renal Disease.—The relation between the arterial and kidney lesions has been much discussed, some regarding the arterial degeneration as secondary, others as primary. There are certainly two groups of cases, one in which the arterio sclerosis is the first change, and the other in which it appears to be secondary to a primary affection of the kidneys occurs, the former, I believe, with much greater frequency than has been supposed.

Practically in a given case of arterio sclerosis, in a man of, say, fifty-five, two or all these factors may be present, and it is exceedingly difficult to assign to each their relative value.

PATHOLOGY.

It is rare to find the arteries entirely free from disease. Even in children small flecks of atheroma or fatty degeneration of the intima are by no means uncommon. In the bodies of middle-aged persons some arterial degeneration is always present, and, as a rule, the older the individual the more pronounced they are. In extreme old age calcification may be a widespread process, but occasionally the vessels of persons above eighty years of age show a very little atheroma.

While arterio sclerosis is a general disease, affecting, as a rule all of the arteries, the process may be much more advanced in some vessels than in others. The arteries of the brain may be stiff and hard, while those of the abdominal organs show no change; or the vessels of the limbs may be stiff and rigid, while the intima of the arch is smooth. The coronary arteries may be extensively diseased in comparatively young persons, while there are no changes in the other vessels. As a rule, this limitation of the disease to the vessels of one organ or to a limited portion of one of the large arteries, is characteristic of syphilis; but there are instances in which this disease can be excluded with reasonable certainty.

In the larger arteries the aorta, for example, the following are the important changes: (a) Small areas of fatty generation of the intima, of a yellowish color, not raised. This may

be the only lesion present. (b) Gelatinous-looking raised areas scattered over the intima, and seen particularly about the orifices of the arteries. They are translucent, and on section are seen to be confined to the intima. (c) Larger plaques of yellowish color due to fusion and fatty degeneration of b. (d) Calcified plaques. (e) Areas of atheromatous softening, which may project above the level of the intima. (f) Open atheromatous ulcers, usually flat and due to the breaking down of foci of atheromatous softening. In advanced cases the inner surface of the aorta is rough and irregular from the presence of calcified plates and areas of softening. (g) On section of the vessel the changes are found to be chiefly in the intima, but the media is usually atrophied, sometimes with foci of necrosis and areas of calcification, sometimes of true ossification. The adventitia is thickened and indurated, but necrosis and calcification are rarely seen in it. In many instances we find all grades and phases of the process going on side by side. The artery may be dilated, and sometimes there are small aneurismal bulgings.

Recent researches lead to the conclusion that in the ordinary type of arterio sclerosis the primary lesion is in the media, either productive or degenerative. To compensate, a reaction occurs in the intima with hyperplasia of the subendothelial connective tissue which undergoes hyaline, fatty and calcareous change. According to Thoma's view, this reaction of the intima is compensatory and adaptive, tending to strengthen the wall in the spots where it is weak and to restore the original lumen of the vessel. As age advances the smaller vessels show definite changes chiefly in thickening of the intima and moderate hypertrophy of the other coats. Later, degeneration occurs, fatty and necrotic, particularly in the muscle cells and in the elastic fibres of the media, and calcification is common. Intimal thickening in which both the elastic and connective tissue elements are concerned is perhaps the most constant feature in all types of arterio sclerosis. It may be out of all proportion to the changes in the media, and may narrow or obliterate the lumen of the vessels—endarteritis obliterans. This is the most important single factor in the disease, responsible for more symptoms than all the other changes put together. It may be limited to one set of vessels as of the legs or of the heart. The physiological intimal thickening as age advances is

believed to strengthen the vessel weakened by senile changes in the elastic and muscular elements of the media.

In the high tension-form there appears to be an early hypertrophy of the muscular elements. In the involutionary and toxic forms, necrosis of the muscle fibers and elastic elements takes place with replacement by connective tissue, fat, or lime salts, very much as occurs in the larger vessels. The medial degeneration seems really as important in the small as in the larger arteries, and in the senile type the calcified beadings follow these necrotic changes.

STATISTICAL STUDY OF BLINDNESS FROM THE STANDPOINT OF PROPHYLAXIS.

BY

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(Read before the Clinico-Pathologic Society of Philadelphia.)

IN a study of statistics relating to blindness, few, if any, are to be found which may be taken as an accurate guide as to the percentage of the preventable cases of blindness and incurable cases of blindness.

The percentages vary according to time, in more recent statistics, as many cases of blindness are now placed in the preventable class as were formerly considered as non-preventable and incurable, thus showing an inverse ratio for the present as to the past; according to location, in Europe 60 per cent. of blindness is due to trachoma as against 2.3² per cent. in the United States. According to hygienic conditions, 80³ per cent. of blindness among the American Indians is due to trachoma, as against 0.55⁴ per cent. among the population of England.

Chief among the causes of preventable blindness is ophthalmia neonatorum. Fuchs,⁵ in his prize essay on preventable blindness, cites Reinhard who found ophthalmia neonatorum to have caused 40 per cent. of the blindness in institutions for the blind in Germany, Austria, Denmark and Holland; Claisse, who found forty-six per cent. in the institutions for the blind in the city of Paris; Magnus, who found 34 per cent. in the institutions for the blind in Breslau; Katz, who found 41 per

cent. in the institutions for the blind in Berlin, and Harmon, who found that 36.36 per cent. of the blindness in the institutions for the blind in the city of London to have been caused by ophthalmia neonatorum.

Howe⁶ states that ophthalmia neonatorum causes 24.38 per cent. of all the blindness in the United States and Canada. Guttman⁷ cites Best of Dresden, who is the authority for the statement that, in 1911, 13 per cent. of the new pupils in the institute for the blind were found to have become so on account of ophthalmia neonatorum as against 30 per cent. of all the cases at the same institute to have become so from the same cause. He gives the credit to Crede's method for the reduction of ophthalmia neonatorum for new cases of blindness from 8.9 per cent. in the year 1881 to 0.4 per cent. at the present time.

Thomas A. Woodruff⁸ writes that 33 per cent. of the blind of New York State School are due to ophthalmia neonatorum. In a study of 32,000 cases⁹ of blindness, only 1.02 per cent. were due to ophthalmia neonatorum. The last percentage was found only in dispensary cases and for this reason it seems that a greater degree of accuracy for a percentage of preventable cases of blindness due to ophthalmia neonatorum can only be obtained by considering the average of the percentages given by the institutions for the blind and by those authorities investigating the prevalence of ophthalmia neonatorum as a cause of blindness. An average from such percentages is found to be 35.56 per cent., the same to be a percentage of (preventable) blindness due to ophthalmia neonatorum as against the remainder of a 100 per cent. from all other causes.

Under syphilis as a cause of preventable blindness are placed interstitial keratitis, optic atrophy, congenital syphilis and diseases of the urea, which cause blindness. Harmon,¹⁰ in a study of three hundred and sixty-three cases of blindness found that 17.6 per cent. of them were due to syphilis. Howe¹¹ gives eighteen as the percentage of blindness due to syphilis, which data is based upon his researches. H. C. Greene¹² claims that six per cent. of the blindness in a typical large city is due to syphilis. Magnus,¹³ in a thorough study of 2,528 cases of blindness that twenty per cent. were due to syphilis. An average from the above is found to be 18.53 as the percentage of blindness which is due to syphilis and which is preventable.

Harmon's studies include the following which, because of their etiology, may be designated as preventable cases of blindness. Retinitis pigmentosa, 1.38 per cent.; purulent ophthalmia, 2.20 per cent.; sympathetic ophthalmia, 2.75 per cent.; trachoma, 0.55 per cent.; phlyctenular keratitis, 1.95 per cent., and scarlatina, 2.21 per cent.

Preventable blindness is also caused by industrial accidents, accidents at play, sequelæ of other infectious diseases than have been named and progressive high myopia.

H. C. Greene ¹⁴ states that fourteen per cent. of blindness is due to injuries and that another ten per cent., mainly keratitis of uncertain origin, and corneal ulcers of traumatic origin, go blind because of neglect or rather waste of medical service provided for the use of the same. Magnus give 12 per cent., which is found to be an average percentage of preventable blindness due to injuries.

Under incurable blindness is found atrophy of the optic nerve, glaucoma, traumatism, phthisis bulbi, leucoma adherens, gun shot wounds, chronic iritis, atrophy of the optic nerve from choked disc, toxic amblyopia, congenital defects, unsuccessful cataract operations, optic neuritis (post ocular), foreign body in the ball, malignant myopia, dislocated lens, chorio-retinitis, anterior staphyloma, necrosis of cornea, atrophy of disc following dysentery and diarrhœa, blindness with no history and tumors; but congenital cataracts of certain types are now being successfully operated and patients made to see with proper refraction; some traumatic cataracts are now being successfully operated followed by good vision with proper refraction and also acute glaucoma cases are being successfully operated preventing blindness.

One per cent. of Magnus' eight per cent. of blindness is due to congenital cataract and is easily preventable. Refraction will reduce 0.5 per cent. of Magnus' 8.97 per cent. of blindness due to glaucoma.

In the light of recent investigation ¹⁵ it seems more reasonable to accept Magnus' ten per cent. as a percentage of blindness due to trachoma than Harmon's 0.55 per cent.

Cohn, in a study of one thousand cases of blindness, claims 40-45 per cent. to be preventable. Harmon claims that from traumatism, unsuccessful cataract operations, gunshot wounds, foreign body in the ball and dislocated lens, 30 per cent. of blindness is caused. Blair ¹⁶ places 40 per cent. as a fair esti-

mate of preventable blindness. Cohn¹⁷ estimates 33 per cent. of blindness as being preventable. Howe¹⁸ states that over 50 per cent. of cases of blindness are due to ophthalmia neonatorum and syphilis.

To sum up after a conservative estimate the following table is offered:

Ophthalmia neonatorum	25.56%
Syphilis	18.53%
Retinitis pigmentosa	1.38%
Purulent ophthalmia	2.20%
Sympathetic ophthalmia	2.75%
Trachoma	10.00%
Phlyctenular keratitis	1.95%
Scarlatina	2.21%
Injuries	12.00%
Glaucoma	0.50%
Congenital cataract	1.00%
High myopia	0.50%
Total	88.58%

This totals 88.58 per cent. as the percentage of all blindness which is preventable as against 11.42 per cent. as the percentage of incurable and non-preventable blindness. Even after eliminating purulent ophthalmia and high myopia there still remains 85 per cent. as a percentage of blindness which is conceded to be preventable blindness as against fifteen as a percentage which is non-preventable and incurable.

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Transactions of the Homoeopathic Medical Society of the State of Pennsylvania.

BUREAU OF PATHOLOGY AND PATHOLOGICAL ANATOMY

JOHN C. CALHOUN, M. D., Chairman

THE RELATION OF TISSUE-PATHOLOGY TO THE CAUSE AND CURE OF DISORDER.

BY

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INTRODUCTORY NOTE.—Were the conclusions from Hahnemann's investigations the universally-accepted basis of treatment, were the doctrines which he formulated as the basis of the art of healing thoroughly expounded and demonstrated in all the colleges claiming Homœopathy as their standard, this discussion would be too commonplace to present to this society. The subject deserves, however, more emphasis than even one society-discussion can afford, and is well worthy of present consideration.

PATHOLOGICAL TISSUE.

Tissue-Pathology deals with abnormal alterations in the cells of the body, many of which can be observed by gross examination: where normally soft tissue becomes hardened; normally hard tissues soften; cells multiply and form tumors; ulcers and eruptions appear; tissues degenerate, assuming malignant character or fatty form. Also included in pathological phase are the secretions of various glands become morbid, and discharges changed in quantity and form, or occurring where there should be none. Yet other forms require the microscope to distinguish absolutely the pathological identity contrasting with the cells of normal tissue.

Under the head of Pathology are included also the changes occurring in active inflammation of tissues, results remaining after inflammation subsides, suppurative products, and the specific forms of organisms associated with disorders of specified name—acute and chronic.

CAUSE OF DISORDER.

What relation have these various processes and their results to the disorders associated with them in the organism?

As a basis for this understanding, let us briefly recall what is health:

"In the healthy condition of man, the spiritual vital force—the dynamis that animates the material body—rules with unbounded sway, and retains all the parts of the organism in admirable, harmonious, vital operation, as regards both sensations and functions, so that our indwelling reason-gifted mind can freely employ this living, healthy instrument for the higher purposes of our existence.

The material organism, without the vital force, is capable of no sensation, no function, no self-preservation; it derives all sensation and performs all the functions of life solely by means of the immaterial vital force which animates the material organism in health and in disease.

(Without the vital force the organism is dead, subject only to the power of the external physical world: it decays, and is again received into the chemical constituents.)

When a person falls ill, it is only this spiritual, self-acting vital force—everywhere present in his organism—that is primarily deranged by the dynamic influence upon it of a morbid agent inimical to life; it is only the vital force, deranged to such an abnormal state, that can furnish the organism with its disagreeable sensations and incline it to the irregular processes which we call disease. As a power, invisible in itself, and only cognizable by its effects on the organism, its morbid derangement makes itself known only by the manifestations in the sensations and functions of those parts of the organism exposed to the senses of the observer and physician: that is by morbid symptoms." (*Organon*, Secs. 9-11.)

Thus wrote Hahnemann; seek where we may in scientific literature, we shall find no more comprehensive discussion of the subject. His meaning herein simply phrased is exhibited in modern writings in terms of physics and metaphysics referring all causative influence to the plane of metaphysics.

This view embraces all there is to man as an entity—thought, will, sensations, and the organized collection of cells—not only the visible temple of the organism, but as well the tenant of the temple—the man himself.

"The true success of Homœopathy is because it deals with man as something higher than a mass of bones, muscles and nerves."¹ (I. V. Reel, M. D., Philadelphia.)

¹ The Homœopathician, April, '13.

While the controlling force governs the functions in order, disturbances from without are banished by increased or decreased activity responding to the external stimuli, unless the integrity of tissue or connection of parts be totally destroyed. Even the compensating growth of tissue to replace that destroyed is accomplished to an amazing degree in many instances of injury. The re-creative limitation of this force are not . . . absolutely to be set.

When this vital order is disturbed or lost, then result—abnormal affections, disturbed intelligence, pain or other changes of sensibility and reaction to environment, or irregular circulation. The digestion becomes defective, nutrition and disposal of waste-products are deficient, nerve-responses are altered, and finally cell-changes and tissue-changes occur.

As life-force precedes the formation of tissue and organs in the organized body (the life-force conserved and transmitted in semen to ovum), and the activity of the body continues only under the influence of that force, ceasing when it is withdrawn:

So disorder in life-force precedes formation of the abnormal cell and tissue, which continue to develop only with the influx of disorder, and cease when that is withdrawn or is transformed into order.

In every individual case of sickness in which pathological tissue is found, careful investigation into the history of the patient elicits report of symptoms beginning long before the appearance of the adenoids, or tumor, or suppuration, or tubercular ulcer, or whatever it may be. Sometimes these evidences—disordered functions of the mind or body—have existed so long that the patient individual has not realized that they are not naturally to be expected; sometimes they are accepted merely as idiosyncrasies of the individual and are not accounted disorder. In chronic disorders symptoms will be found to have existed from infancy, though suppression may induce the disappearance of some expressions—with replacement by another group of symptoms. In such instances the patient is considered to have a different disease, but that is an error. Also in the development of pathological tissue, symptoms which characterized the individual disappear, and only the organized pathology and those secondary symptoms dependent on such tissue remain.²

²Address by Dr. Kent, Trans. Soc. of Hom., The Homoeopathician, July, 1912.

"The dynamis creating them is continued into the ultimates" but the ultimates owe to that influx whatever force inheres in them. Poisonous discharges—virulent bacteria—but carry the disorder-influence from which they were created.

The French bacteriology experts (Mary Brothers), who made artificial bacilli of Koch by placing glycerophosphate of lime in the presence of tuberculin,³ demonstrated the creative force of that poison which ultimates the organisms usually associated with it. In a discussion of the subject of bacteria and disease,⁴ Dr. Kent describes the growth of fire-weed on land completely scourged by fire; of pig-weed on the site of pig-styes of old lumber camps; of smart-weed where cattle had been stabled and of nettle where the waste from the humans had been cast. Within a given area, the vegetable growth was variously determined by the nature of the soil as modified by these other elements.

Contagious acute disorders that attain their height of development before the specific bacteria can be demonstrated; the intensely virulent character of cadaveric flesh before bacteria develop, which decreases as the organisms multiply; the decreased virulence of typhoid fever effluvia in proportion as the bacteria increase; are illustrations not only that the organisms ultimate from the disorder--influx, but also that the disorder-influence (the virulent influx) is consumed in the process of their creation. The poisons in vaccines and serums present ample evidence that the disturbing influence exists and persists when the organisms are separated and discarded. Bacteria are the ultimates, carrying the dynamis that created them.

CURE OF DISORDER.

Seeing then that all pathological tissue is the ultimate of disturbances which preceded it in the organism—it is evident that removal of such tissue by surgical, mechanical, or local treatment of any sort does not serve to relieve the system of the disorder which constitutes the sickness. Even medical treatment that relates only to the pathological forms and not to the individual disorder is of no true benefit. Such removal gives no assurance that the disorder which manifested in these

³Consumption in Man, by R. del Mas, M.D., *The Homoeopathician*, December, 1912.

⁴The Plane of Disorder and Cure. *Transactions, Soc. of Homoeopathicians*, 1910.

forms will not repeat its manifestation. Experience demonstrates, indeed, that:

"Local treatment suppresses, hushes, the external manifestations. The disease thus hushed proceeds at once to change its form, and later appears in more malignant form."⁵

Dr. Parenteau, a French oculist, writing of "Some Rare Cases of Asthenopia," comments: "The ablation of any organ—partial or total—leads to ulterior damage that the surgeon never sees, but which the physician must repair."⁶

All that can rationally be expected as advantage gained by external or local removal of these tissue-products is deliverance from such symptoms as are dependent solely upon the presence of the abnormal structures, either mechanically or through interference with some function—while such freedom must be paid for by later results, usually more serious.

Cumbersome results of disorder may be mechanically removed—with safety to the patient and assurance of no return—only after the influx which created them has been discontinued, after order in the economy has been so far restored that the local tissue no longer receives its creative influx, and if the mass developed remains as a foreign body and occasions serious discomfort.

CURE OF PATHOLOGICAL TISSUE.

The only safe methods that can be offered for relieving the sufferer from inflammations, suppurations, abnormal growths and bacterial affections are such as take cognizance of the internal disorder, and aim to restore normal life-processes. Thus only . . . may abnormal development be checked and, as a sequence, the tissue is removed by the natural methods of elimination.

"Knowledge of—

"What is to be cured in disorders;

"What is curative in medicines—in each individual medicine;

"How to adopt, according to clearly defined principles, what

⁵L'Homoeopathie Française, November, 1912; The Homoeopathician, February, 1913.

⁶L'Homoeopathie Française, November, 1912; The Homoeopathician, February, 1913.

is curative in medicines to what is undoubtedly morbid in the patient" ⁷ does enable the physician to cure the patient.

Just as truly as when Hahnemann announced these necessary precautions, the administration of remedies according to the doctrine he formulated results in cures, as he said: "With a certainty never before known," ⁸ and on this basis—"The remedies discovered by Hahnemann will stand the test of experience for years to come, as they have grown stronger by use since their discovery." ⁹

THE CURATIVE PRESCRIPTION.

Many important considerations in the selection and the use of remedies that they shall fulfill their aim must be neglected in the present discussion:

- Individualization of the patient;
- Characteristics of the patient and of the remedy;
- Provings of drugs;
- Potentization, and value of potencies;
- Prescription of the single remedy;
- Repetition of the dose;
- Use of the Repertory,

all are necessary; but just here let us emphasize that to determine "which of all remedies proposed, is that one that solely and especially can and must be of service," ¹⁰ dependence is to be placed on the totality of characteristic symptoms of the patient, cited by Hahnemann as "the sole means whereby the disease makes known what remedy it requires." ¹¹

"The truly characteristic symptoms of the patient exist exclusively outside of the pathological group of symptoms of the discerned disorders. They are symptoms which never necessarily belong to the disease, nor to any form of it, but appear absolutely accidental," said Adolph Lippe. ¹²

"Objective phenomena—any tissues of a material kind that the physician can detect for himself, however valuable for completing the diagnosis of present condition and prognosis

⁷ Organon § 3.

⁸ Ibid.

⁹ Kent—Editorial. *The Homoeopathician*, January, '12.

¹⁰ Organon.

¹¹ Organon.

¹² *Materia Medica*, Med. Adv. October, '12, *The Homoeopathician*, March, '13.

as to probable results—are not the disease nor the object of treatment,” said Edward Mahony.¹³

The remedy must fit the entire organism, and when it does the “probable results” can be prognosticated, in recent years, far more favorably (?) than before the true disciples of the Law of Similia had mastered the *Materia Medica* and the doctrines for applying it, and had given the remedies an opportunity to demonstrate their powers.

The experience of those who have used “the only pure medical art ever given to man”¹⁴ is registered in unnumbered cures throughout the world. A few instances have been recorded in Society Transactions and medical journals. From these are selected at random a listed handful: (See pages 302-303.)

The remedies used succeeded because—as Theophilus Ord said, in discussing “Treatment of Pulmonary Tuberculosis,”¹⁵ “in each case they correspond to the constitutional taint which was the prime factor in causing each patient to develop the disorder, although there is nothing in their symptomatology which simulates the characteristic of the disease.”

In many of the preceding instances the patients reported the diagnosis here given as the verdict of some specialist who preceded the reporting prescriber in examining the case. The recognized character of these prescribers—Majumdar, Banerjee, Austin, Kent, Linnell, Boger, Morgan, Thacher, Bidwell, Taylor, Coleman, King, Neverezée, Berridge, Hayes, del Mas, Reel, Green, Patrick, Holloway, Henderson, Cooper, Deck—in professional work make unnecessary any question as to the verity of the records.

When we have witnessed these results of careful prescribing, times without number, and when others following the same principles report results of the same character, we involuntarily endorse the sentiment expressed by Hahnemann: “How insignificant and ridiculous is mere theoretical scepticism in opposition to this unerring, infallible, experimental proof.”¹⁶

When members of the medical profession feel it incumbent on them to declare such results “visionary, extravagant, impossible, and calculated to bring discredit to Homœopathy”—

¹³ *The Homœopathician*, March, '13.

¹⁴ Kent—Editorial, *The Homœopathician*, January, '12.

¹⁵ *Brit. Hom. Jour.*, Sept., '12, *N. Am. Jour. of Hom.*, Dec., '12; *The Homœopathician*, Dec., '12.

¹⁶ *Organon* 281.

When we hear those entrusted with treatment of the sick direct that "whenever the presence of pus is determined (or suspected) an outlet for it by surgical interference is imperative to protect the patient from more serious disaster," and declare that the homœopathically indicated remedy is inadequate when tangible results of disorder are present—

We know that these practitioners thus register their own unfamiliarity with the action of remedies and the working of the doctrines.

Hahnemann's teaching is reiterated in the modern language of Kent: "Man is prior to his organs." Homœopathy cures from within, out, from the innermost to the outermost, from man to his tissues, merely by administering the indicated potentized remedy, and that without occasioning injury. By restoring order in the economy it resolves the pathological process and the tissue-results of disorder.

If we remove these results without restoring order, we do not cure the sick. Hahnemann's staunchest disciple of the present time reflects the dictum of the Master of a century ago, when he says: "If we fail to cure sick people we are not homœopaths." ¹⁷

CLINICAL ILLUSTRATIONS.

Mammary Tumor.

May 26.—Miss R. H., 23 years old, called in the office because of a lump in the right mamma.

R. mammary gland at inner margin presents a tumor size of a small hickory nut—

So far to the edge that it was not clearly ascertained to be part of the gland or to be beyond it.

Has just detected it, attention attracted by Bruised pain when touched.

Few years ago, had pustular eruption on face; Constipation at time of eruption;

Used Rochelle salts daily, and eruption and constipation both improved.

Respiration difficult when excited.

Catarrh—of pharynx—must clear mucus out—No expectoration.

(Continued on page 304.)

¹⁷ Kent—President's Address, Soc. of Homœopaths, 1912, *The Homœopathian*, July, '12.

Science and Art	PATHOLOGY—CAUSE AND CURE OF DISORDER			Homoeopathician, Nov. '13
DISORDER	REMEDY	PRESCRIBER	RECORD	ISSUE
Malignant Liver Disorder	Kali-c.	Wheeler	Homoeopathician	Jan. '13
Uterine Cancer.	Calc-c.	Majumdar	Indian Hom. Rev.	June '13
Inoperable Cancer.	Ceanothus	Thatcher	Hom. Recorder	July '12
Cancer.	Chelidon.	Berridge	Homoeopathician	Apr. '12
Ranula.	Thuja	Majumdar	Indian Hom. Rev.	Nov. '12
Hepatic Calculi	Nat-s.	Kent	Homoeopathician	Jan. '13
Hepatic Calculi	Nat-s.	"	"	Apr. '12
Hepatic Calculi	Cham.	Bidwell	"	Sept. '12
Vesical Calculi	Rhus-t.	del Mas	"	Mar. '13
Cholera.	Arsen.	Banerjee	"	Feb. '12
Carbuncle.	Anthrax.	Majumdar	{ Indian Hom. Rev. Homoeopathician	June. '12 Dec. '12
Diphtheria	Conium	Taylor	Medical Advance	Oct. '11
Diphtheria (2).	{ Lachesis. (1) Merc-sol. (2)	Patrick	Homoeopathician	Jan. '12
Eczema	Arsen.	Boger	Med. Advance	Oct. '12
Eczema	Cham.	Nevreze	L'Hom. Francaise	Nov. '12
Eczema	Graph.	King	Homoeopathician	Sept. '12
Eczema	Lycop.	"	"	Feb. '13
Eczema	Kali-sul.	Kent	"	July '13
Eczema (several)	{ Graph. Psorin.	Henderson	"	"
Warts	Caut.	King	"	Feb. '13
Warts (syctotic)	Medor.	Berridge	"	Apr. '13
Warts (penia)	Caut.	Thatcher	Hom. Recorder	July '12
Cervical glands	Pulsatilla	Kent	Homoeopathician	Jan. '13
Goitre.	Bovista	Boger	Med. Advance	Sept. '12
Enlarged glands	Calc-c.	Kent	Homoeopathician	Nov. '12
Indurated parotid.	Kali-c.	del Mas	"	Apr. '13
Tubercular glands.	{ Tuberc. Calc-c.	Kent	"	Oct. '12

Valvular heart-disorder	Tarent-h.	Austin	Homoeopathician	May '12
Endocarditis	Aurum	Kent	"	Sept. '12
Rheumatic myocarditis	{Ledum	Kent	"	Feb. '13
	{Aurum			
Ossification of Heart-tissue	{Cenchris	Hayes	I. H. A. Trans.	1908
Pleurisy	{Sulph.	Barlee	Prop. de l'Hom.	Apr. '12
Otitis media	Bacil.	Linnell	Journ. O. O. & L.	Sept. '12
Appendicitis	Bor-m.	Henderson	Homoeopathician	Apr. '13
	{Merc., Bell.,			
	{Bry., Nat-s.,			
	{Rhus, Sil.			
Appendicitis sup.	Pyrogen	Loos	Trans. A. I. H.	1909
Sciatica	Lachesis	del Mas	Homoeopathician	Apr. '13
Mastoiditis	Caps.	Abt	"	"
Pneumonia	Phos.	Reel	"	"
Chronic Otorrhoea	Merc-sol.	Banerjee	"	Feb. '12
"	Pulsatilla	Holloway	"	"
Meningitis	Opium	Green	"	June '12
Fibroid Excrescence of Knee	Calc-c.	Morgan	"	Mar. '12
Albuminuria & Eclampsia	Cuprum	Reel	"	Apr. '13
Infantile paralysis	Caut.	Kent	Homoeopathician	Feb. '13
Chancres	{Arsen.	Kent	"	"
	{Nitric-ac.			
Adenoids	Pulsatilla	Deinst	Critique	"
Adenoids	{Stram.	Abt	Homoeopathician	Apr. '13
	{Puls.			
Mammary tumor	Conium	Coleman	Med. Advance	Oct. '12
Aural polypi	Formica	Copeland	Journ. O., O. & L.	Sept. '12
Intestinal tuberculosis	Scrophularia	Cooper	Homoeopathician	Apr. '13
Pelvic Tuberculosis	"	Deek	"	"
Gastric ulcer	Kali-bich.	Kent	"	July '13
Myositis ossif	Thuja	Tyler	Hom. World	July '13

The remedies used succeeded because—as Theophilus Ord said, in discussing Treatment of Pulmonary Tuberculosis*—"in each case they corresponded to the constitutional taint which was the prime factor in causing each patient to develop the disorder, although there is nothing in their symptomatology which simulates the characteristic of the disease."

*Brit. Hom. Jour., Sept. '12 N. Am. Jour. of Hom., Dec. '12; The Homoeopathician, Dec. '12

Post-nasal mucus, difficult to blow out, is swallowed.

Neck tired at the base of the skull—

From bending forward.

M. usually at thirty days' intervals—

Comfortable;

< before M.

June 12.—Has had two remedies, but mammary gland is <.

Tumor increased to $2\frac{1}{2}$ inches in diameter;

Dull redness on the top about $1\frac{1}{2}$ inches and increasing in area—

Becoming more purple;

Soreness, drawing pain before and first day of menses.

< exercise of r. arm; < pressure.

> when quiet; > when walking.

Pulsating pain while reclining.

Feet swollen before M., after walking in afternoon of one day and all the next day.

Face swollen sensation often in warm weather.

Perspiration axillary offensive in warm weather;

Feet in warm weather offensive.

Leucorrhœa white, offensive;

< after M.

Prefer warm drinks; aversion to ice cream.

Larynx-catarrh: } *Calc-c.*, *Calc-s.*, *Nat-m.*

Offensive foot-perspiration: } *Phos.*, *Sil.*

Discoloration (purple) bluish: *Calc-c.*, *Nat-m.*, *Sil.*

< pressure: *Calc-c.*, *Nat-m.*, *Sil.*

Inflammation mammæ: *Calc.*, *Sil.*

Mammary nodules: *Sil.*

SILICA 200.

I kept this patient waiting a day to take time for selection of the remedy.

June 20.—Mammary lump had more pain, two or three days,

No pain now, except when struck;

Itching.

Reduced to $1\frac{3}{4}$ inches diameter.

Redness less intense;

Protruding more at surface; was more beneath surface at first.

Eruption appeared more on face for a few days, but is less now.

Coryza since 14th.

June 30.—Mammary tumor not visible. By deep palpation lobules appear slightly indurated but not enlarged at the site of the tumor.

No pain since 20th.

Skin has slight discoloration as of an old bruise.

SILICA 200.

July 14.—Gland entirely level at site of tumor.

Slight induration of one or two ducts. Color nearly normal.

Local symptoms entirely disappeared.

Carbuncle.

1913

July 7.—Mrs. M. D., aged 37 years. Father died of consumption at age of seventy years.

Peri anal carbuncle developing for two weeks.

Tumor size of a walnut:

Pain burning, slight when sitting; when walking.

Has used iodine, antiphlogistine, camphorated oil, locally.

Had a boil on the leg in girlhood.

Hemorrhoids external not much swollen now.

Flatulent digestive disorder since 14 years old—

At which time she took quinine for liver trouble;
<fried food, ham, milk and sweets.

Headache in vertex at close of M.

>by vomiting.

<by constipation:

Begins toward evening.

Constipation for years; uses laxatives.

Face: brown circles below eyes.

<heat—weakness; > in winter.

Wants much cover in cold weather;

Easily chilled, lack of vital heat.

SULPH. 1m.

Aug. 2.—Carbuncle: less soreness and softer by July 12.

Ruptured on 14th and discharge continued for two weeks.

No pain since July 28th.

Daily, comfortable fecal evacuations

Has felt well generally.

EDITORIAL

A CLINICAL VERIFICATION OF HAHNEMANN'S LAW.

THERE never was a more favorable time than the present for the reception of homœopathy. The whole trend of scientific research is towards the power of infinitesimals. We are no longer staggered by the calculations and accomplishments of the pioneers in physics, in their ability to transmit the human voice for miles through a telephone, nor are we amazed at the astounding results of a Marconi in the sending of daily Marconograms over miles of trackless ocean and without the agency of wire transmission. Roentgen alone has opened up a new field of the ultra-finite in the domain of matter and already some years have elapsed since the epoch-making discoveries of Pasteur were first announced along bacteriologic lines. As Pasteur revealed it, the science of bacteriology concerns itself with the smallest forms of life, and the part they play in the universe has only lately been recognized, and so the small dose of homœopathy is no longer the stumbling block. We already accept the ions and the corpuscles as the ultimate constituents of matter.

The latest corroboration of the power of infinitesimals occurred at the meeting of the Homœopathic Congress at Ghent, on August 10th, 1913. Dr. Manuel Cahis, of Barcelona, produced two perfectly similar healthy rabbits; to *both* he gave one-half a mg. of strychnine, which is a lethal dose. The one rabbit was allowed to die, as a control. The other was treated with injections of a solution of anti-tetanic serum, dynamized to the 6000 decimal. A few of the globules were dissolved for the purpose. These injections were repeated at short intervals until the rabbit recovered; it ate green stuff with avidity, and an hour afterwards it was photographed, apparently none the worse for the experiment.

Vaccines and vaccine therapy are only other illustrations of the law *similia similibus curentur*, and the action of vaccines is now acknowledged to be homœopathic.

In connection with this subject it is interesting to note that

one of the latest volumes to be added to the Everyman's Library is a translation of the *Organon* of Samuel Hahnemann, and is from the able pen of Dr. Charles E. Wheeler, of London. The whole field is thus prepared for us. The dominant school have thrown physic to the dogs and are all using vaccines. 'Tis but a step and they will be using *medicines* homœopathically. The younger set of the old school to-day for the most part are not hostile to homœopathy. Well do they know how limited are the powers of medicines, as they have been taught to use them, and so they frequently resort to surgery and vaccine treatment. To use medicine on the same principles as vaccines are used is a new idea to them, but coming at this epoch is not repulsive, nay it offers a kind of charm. The older men, the so-called "Leaders of the profession," acknowledge all the above, regret the schism of homœopathy, and could they be dealt with as individuals would readily fraternize with the followers of Hahnemann, but for the terrible fear they have of each other, and what others would think and do if they acted as they would like to do. This, very briefly, is the position of the profession to-day. Modern discoveries all corroborate the truths of homœopathy and the younger men of the old school are receptive, but the "leaders" are hopeless.

For the data bearing upon Dr. Manuel Cahis's wonderful experiment we are indebted to Dr. J. Roberson Day, of London.

DONALD MACFARLAN.

THE IMPORTANCE OF COLLABORATION.

At a recent meeting of the British Homœopathic Congress, Dr. D. MacNish read a paper of note pertaining to the importance of the collaboration of the physician and the clinical pathologist in the homœopathic practice of medicine. In practice, as Dr. MacNish sees it, it is our daily problem to cure. Ever since there have been sick people, there have also been people who have tried to relieve or cure them. There has ever been the problem of diagnosis and prognosis. The patient desires to know the nature of his illness, his chance of cure and his future condition of health, should the treatment employed have afforded him the opportunity of living. Without an accurate diagnosis this is impossible. Yet without an accurate diagnosis a cure can often be effected. Dr. Raue long ago

said that the symptoms which go to make up the choice of the remedy often stand outside those that go to make up the pathology of the case. The immortal Hahnemann states that the totality of the symptoms is the only indication—the only guide to the selection of the remedy. In a vast and a preponderating number of cases this is true, but it does not apply to certain cases which justly belong to the surgeon and no one else. How often does disease, and disease of a serious nature, such as a malignant growth, appear insidiously and with no definite symptoms, objective or subjective, than its own presence in the body, end only in the painful dissolution of the sufferer after a short course. From the very start this is a case for surgery and not medicine. In such a case all therapeutic treatment to begin with, is futile, although after operative intervention medical treatment may be of inestimable value to control such inadvertent contingency as abdominal distension, delirium, nervous excitement or other unlooked-for complication. Here, the surgeon with an ability to prescribe carefully, will be assured the best results as a reward for his abilities. To treat a case like the above, however, entirely medically from the start to finish is worse than futile. It is positively dangerous and unfair to the patient and prevents the chances of relief at the hands of the pathologist and surgeon.

In theory an accurate diagnosis is the test of the physician: in practice the poor diagnostician is very frequently the most gifted prescriber and the one getting the best results from treatment.

In homœopathy we possess an enormous mass of facts and experience. In this system of treatment there are many methods. Each one has its votaries, and our practitioners are quite often divided into sects—sects which are sometimes as intolerable and intolerant as those met with in the world of religion and politics. One may classify these specific and rather divergent ways of prescribing as follows. (They are all useful and the discerning mind can gain from each of them):

(1) *Generals to particulars.* This is a method advocated by Dr. J. T. Kent.

(2) *Particulars.* This is the key-note system and was a favorite method of Dr. Timothy F. Allen.

(3) *Pathological condition.*

(4) *Purely constitutional or nosodal system.* A method of

treating each patient, no matter what his symptoms are, on his constitutional condition.

(5) *The sequential method.* This was first advanced by Dr. Woodward. It is a method of judging the symptoms by their sequence.

(6) *Organopathy. Seropathy. Associated congeners.*

The repertory is not the essential of homœopathic prescribing—it is only an indicator—it directs your attention to certain drugs, but prescribing from this alone is fundamentally wrong; it is a symptom of mental deficiency and retards the progress of medicine. The mechanician in homœopathy is an excrescence and tends to bring our valuable system into disrepute and contempt. The arithmetical calculations are evidence of a brain whose protoplasmic substance is either undeveloped or warped, and whose highest aim is to bring the art of medicine to the level of a machine.

In treatment we consider :

- (1) The patient.
- (2) Symptoms.
- (3) Ultimates.

In (1) —*the patient*—constitutional remedies act fairly well. In (2)—*symptoms*—these often disappear under the constitutional treatment, and more often naturally even in spite of treatment, but often disappear under remedies chosen on the key-note system, and on their pathology. In the case of (3)—*the ultimates of disease*—the pathologist and surgeon succeed, and the physician is of little value except in the removal of minor symptoms. The vicious circle is often set up by the ultimates of disease, and to break this circle the pathologist is the most valuable factor in the treatment. Dr. MacNish considers, and quite rightly, that no one can be in ordinary practice without experiencing the great assistance rendered by the pathologist, not only in diagnosis but in the treatment and prognosis of disease. The domain of pathology is of such scope that it is well wrapped up in the consideration of a preponderating lot of daily affections even of a more or less trivial character.

The examination of the blood, the urine, the sputum, the fæces, the vomitus, etc., and the presence of the Widal and Wasserman tests, not to mention many others, afford a basis which the homœopathic physician cannot at the present day afford to be without—at least, if he wishes to do

justice to his patient, to advance the science of medicine, and avail himself of the most scientific system of treatment. Dr. MacNish then through the kindness of Dr. T. G. Stonham, narrated a case of great clinical interest and pertinent in point of fact to the consideration in value of pathological service to general practice. To summarize, Dr. Stonham's case was as follows: Miss C., aged 51 years. Catamenia ceased two years ago. Soon after the latter's cessation, she had had a serious attack of influenza and has not been so strong since. She is more easily fatigued, becomes out of breath on exertion, and frequently complains of a wheezing with a feeling of tightness over the manubrium. Dr. Stonham was called in to see her on July 4th, 1912, because she had awakened in an asthmatic attack. Breathing was still very difficult in the morning, and there was a good deal of cough with it, but not much expectoration; whistling was heard in the chest, but very few moist sounds. Evidently the asthma was of a dry and spasmodic variety. These attacks continued off and on for weeks and were often extremely distressing. The attack would come almost daily or nightly and occur at any hour; but she had to sit up and lean forward panting for breath till almost worn out. The heart became dilated, and the pulse habitually feeble and rapid. The usual remedies were in turn given. Arsenicum in the intervals was of a decided benefit. Some improvement gradually took place. She was given the service of a trained masseuse, who massaged the chest and abdomen and taught her deep breathing. Dyspepsia was a troublesome symptom, but the bowels were regular throughout. The breathing exercises were decidedly beneficial. She was then sent into the country, to Kent. She remained much the same. The case had become less acute, but she seemed to have reached a state of chronic dyspnea with sub-acute exacerbations.

While the patient stayed in the country Dr. Stonham gave her once a week a dose of the 30th dynamization of an endotoxin that he had made from the sputum of another asthmatic patient, and which had in his case done good. The micro-organisms were the *staphylococcus albus* and the *micrococcus catarrhalis*. As this did no good to Miss C., Dr. Stonham therefore procured an endotoxin which had been gotten through Dr. Hare. Dr. Hare prepared the endotoxin from her own sputum, which had contained the *bacillus influenzae* and the *micrococcus catarrhalis*. The preparation was run up to

the 30th dynamization. On the 22nd of September a dose of this medicine was given early in the morning. There was an aggravated attack the following night, but she then rapidly improved, both in her breathing and general health. Another dose was given ten days later with no aggravation, but continued improvement in health. She could soon go on long walks. Her heart became stronger and her pulse slower. The asthma went entirely and all cough disappeared. Her appetite and digestion improved; in point of fact, she was now a new being and declared she had not been so well for years. This improved condition has remained ever since. She was put to a severe test at Christmas, for she caught a bad bronchial cold, but no asthma came on to complicate it and she soon threw it off.

This singular case, which has taken in many of Dr. Stonham's salient data serves well to corroborate Dr. MacNish on the importance of the collaboration with the pathologist. In the race of medical life we must not be behind nor yet only with the others, but if possible, in advance, ready to avail ourselves of every improvement in practice, no matter whence or from whom it may emanate. We must also convince and prove to the public and our patients that the homœopathic practitioner is quite *au fait* with all new forms of treatment, and not only ready but able to avail himself of them while still keeping to the broad basis of homœopathic law—a law much greater and grander and broader than many of our practitioners imagine. No form of successful treatment so far, is in any way a contradiction to our law of cure. Baron Swedenborg, the greatest name in astronomy and the promulgator of the nebular hypothesis, is guarantor for the statement that "*the science of correspondences is the science of sciences!*"

"Tut, man, one fire burns out another's burning,
One pain is lessen'd by another's anguish;
Turn giddy, and be help by backward turning;
One desperate grief cures with another's languish
Take thou some new infection to the eye,
And the rank poison of the old will die."

—*Romeo and Juliet*, Act I, Scene II.

DONALD MACFARLAN.

ENDORSEMENT OF HAHNEMANN'S PRINCIPLES BY A NOTED ENGLISH PHYSICIAN.

IN an important article recently published in the *British Medical Journal* (January 3rd, 1914), Dr. James MacKenzie, of London, probably the world's greatest authority on diseases of the heart, condemns in a convincing and forcible manner the methods employed by the dominant school of medicine in the management of the sick and in the study of drug action. Every word of this article, coming as it does from such a keen observer, is worthy of careful study and consideration and we regret that our limited space prevents us from reprinting it in toto.

Referring to the therapeutic methods of the old school, Dr. MacKenzie says: "The backward state of medical education is well illustrated by the attitude of the profession to methods of treatment. The total absence of anything like science in this department, is shown by the great variety of methods of treating any one disease and the extraordinary recommendations that are published by different teachers. . . . Let any one seriously investigate the manner in which therapeutics are taught and exemplified even in those model scientific wards where the chief physician is assisted by some ten or a dozen skilled scientific assistants, and the observing student will find drugs administered and not the slightest attempt made to see if they have the action that the physician supposed them to have. If he cares to investigate the matter more closely and tries to find the ground on which the physician prescribes the drug, it will be found that it is prescribed because some authority has observed that it has a certain effect. If he inquires any further he will find out that in the majority of cases, *the evidence for its action is based on such flimsy grounds that there is no justification for its use.*"

After expatiating at some length upon the lack of knowledge possessed by the old school physicians of even the most common drugs, Dr. MacKenzie adds, "I could say without fear of contradiction that *not one single drug has been carefully studied* so as to understand its full effects on the human system. Even if we take drugs with a deservedly high reputation for their beneficial effects, as those of the digitalis group of remedies, we find the teaching profession has never accurately observed them, so that to-day the principle on which the drugs

are administered is not scientific, but rule of thumb and based upon imperfect observations. The reason for this is partly due to the fact that the profession has never understood the meaning of the phenomena which the drug produced."

"In referring thus to treatment, I use the illustration not only to show how the opportunities for studying clinical phenomena and the action of remedies are neglected, but for another purpose, namely, to show how the attitude of the physician to this subject has a most baneful effect upon the students' minds. In the wards and in the laboratories he is taught to examine a limited number of phenomena, and he is taught laboratory methods with pedantic precision. It may be the student acquires a considerable amount of dexterity in these methods, and there is in the teacher, that sense of satisfaction that the students are receiving a scientific education. When, however, the teacher after all the elaborate examinations *comes to treat his patient*, the student sees some drug given to the patient, because of some supposed effect, and then little attention is paid to what the result may be. He is never taught how to investigate the action of the simplest remedies. When the student passes into general practice he finds the call for these elaborate scientific methods so infrequent that he gradually ceases to use them. On the other hand, to every patient he has to apply methods of treatment. His teaching in this respect has been slipshod in the extreme, and he has no knowledge how to investigate the action of the remedies he prescribes. *He gives remedies because of faith and not of reason*, and as he was never shown how to watch the effect of remedies, he readily becomes the prey of advertising chemists or other purveyors of specific treatments, who describe their wares with a gloss of scientific jargon which mislead the untutored practitioner. So, notwithstanding all the scientific methods, the deplorable state that treatment is in at the present time is due to the slovenly methods employed by those who have failed to grasp the true nature of the science of clinical medicine."

It is scarcely possible to add anything to these words of Dr. MacKenzie. Even Hahnemann himself who has been accused of fanatical opposition to old school methods, could scarcely have stated the case against them more clearly or more severely.

Fortunately Dr. MacKenzie is not alone among the members of the old school, in recognizing the uselessness of the methods that they have pursued so long and so persistently.

Scarcely a month passes in which we do not find some progressive thinker breaking away from the traditional teachings of the past and taking a position that conforms more and more closely to the teachings of Hahnemann.

The writer above quoted realizes clearly, as do all practical clinicians, that old school pharmacology based upon a study of the effect of drugs on animals is practically useless from the standpoint of the therapist, and the time is close at hand when the entire medical profession will be compelled to adopt the method of drug study promulgated and developed by Samuel Hahnemann, namely by noting the results of their administration to human beings.

We are pleased to note Dr. MacKenzie's condemnation of those who would make fine spun diagnosis and pedantic precision the end and aim of medical practice, to the neglect of therapeutics. It is strange that doctors should need to be frequently reminded of Hahnemann's teaching that the duty of the physician is to heal the sick; but such, unfortunately, is the case and, we have contended more than once in these columns, that the loss of prestige the profession has sustained in the eyes of the public is largely due to the fact that many medical practitioners have lost sight of their true functions as physicians.

In closing, we cannot but comment on the fact that the trend of the best medical thought of to-day tends more and more toward the principles and methods advocated by Hahnemann a century ago, and we cannot but marvel that the mind of this great student of medicine should have projected itself so far in advance of the traditional medical thought of his day and generation.

G. H. W.

THE TREATMENT OF RINGWORM OF THE SCALP.—Garrett, of Cheltenham, in the *British Medical Journal* for February 22, 1913, (p. 390), calls attention to a method of treating ringworm of the scalp that he has devised. The strong solution of perchloride of iron is applied with a brush, until the scalp is well stained by it, every second day for six days, and then every third day for eighteen days. At the end of this time a cure is generally found to have been effected. In the beginning the hair should be cut short over the affected places, the scalp well washed, and then cleansed from grease by the use of motor spirit. The head should not be often washed during the treatment. The application has no ill effects, and it does not appear that it need be too scrupulously confined to the areas obviously implicated. Garrett finds that the results of this treatment surpass any other that he has tried.

GLEANINGS

REED, EDWARD N.: INFANT DISEMBOWELED AT BIRTH.—APPENDECTOMY SUCCESSFUL. (*Journal of the American Medical Association*, July 19, 1913.)—Reed reports a most remarkable recovery after exposure of the intestines in a newborn child. At the delivery he noted that the whole intestine, both large and small, was outside the abdominal cavity, having passed through a rupture in the umbilical cord about two inches from the navel. The conditions were of the filthiest and the mass of intestines was covered with straw, feathers, crumbs of food and fecal matter. Because of another urgent call the infant could receive no surgical attention, beyond the ligature of the cord, for two hours. By this time the bowels were matted together with fibrinous adhesions, which were gently separated, and the dirt was washed away with saline so far as was possible. The appendix, although very small, was injured and had to be removed. The intestines were then replaced in the abdominal cavity and the umbilical opening, which admitted the tips of two fingers, was enlarged upward and downward for half an inch and trimmed. The opening was then closed with a layer of buried catgut and silk-worm gut for the skin. The child made an uneventful recovery except for a small stitch abscess.—*Archives of Pediatrics*, September, 1913.

THE BLOOD PICTURE IN THE EARLY DIAGNOSIS OF MEASLES.—In the study of the value of the blood picture in the early diagnosis of measles, especially in relation to the question of isolation, William P. Lucas, M.D., San Francisco, found that during the pre-eruption stage of the disease (measles) there is a leukopenia involving the polymononuclear neutrophils, the lymphocytes and the large mononuclear leukocytes. This leukopenia develops in five to ten days after inoculation and may be preceded by a transient lymphocytic and a large mononuclear leukocytosis, which is probably lacking or only poorly developed in the severe form of the reaction, but is strongly developed in less severe cases.

He says: "As measles is probably the most contagious disease that we know, next to smallpox, we must recognize it before the stage of lachrymation, coughing and sneezing and profuse serous nasal discharge if we hope in any way to prevent its spread. In fact, experimentally, it has been proven that the blood at this period is more infectious than in the eruptive stage."

His observations brought him to the following conclusions:

1. Blood examination under such conditions is of definite value.
2. There is an early change in the blood picture which may be taken as the first evidence of the infection. This consists in a change from the ordinary lymphocytic predominance which exists normally in infants' blood, to a relative increase in the percentage count of the neutrophilic type of cell. Though there is an actual diminution, here

also the diminution in the lymphocytes far exceeds that of the neutrophils, so that there is a complete reversal of the blood picture. The normal percentage of lymphocytes in infants' blood ranges from about 55 to 70 per cent of the white blood-cells; whereas the neutrophils range from about 25 to 30 per cent, the large mononuclear cells ranging from about 8 to 15. The earliest sign which appears in the blood of an infant coming down with measles is a beginning reversal of this picture. The reversal usually begins about a week before any visible symptoms of infection occur. The actual reversal has occurred at least forty-eight hours before the earliest signs are visible, that is, Koplik spots, coryza or coughing. There is also a definite constant leukopenia present which sometimes appears eight days before any physical signs, and sometimes appears simultaneously with the physical signs. For this reason it is not so reliable a diagnostic method as the cell picture, which is far more constant and reliable as a determining factor in making an early diagnosis.

3. There appears an ever increasing number of disintegrated cells, which first make their appearance about the time the cell picture begins to change. These disintegrated cells may not be specific, and probably are not specific in measles; but with the reversal of the blood picture, they are to be counted as a definite factor in the early diagnosis. They appear to be in many instances large, swollen cells, with protoplasm breaking up and the nucleus, as it were, water-logged or breaking up into fragments. The shape varies from round to oval, with no sharply defined outline. Granulations are abundant, and they can be seen separating from the nuclei.

I feel sure that this combination finding in blood in suspected cases will be of considerable value in the early detection, therefore in the early isolation, of suspected cases; and that this method has been able in my hands to cut down the probable incidence of measles in my ward by 25 or 50 per cent, as it is not an unusual thing to have every child exposed to measles come down with it; and every new case adds to the chances of the others in the ward coming down.

PERICOLIC MEMBRANOUS FILMS AND BANDS.—The author had previously concluded that right-sided pericolic adhesions and membraniform veils and bands formed a fairly distinct pathological entity, deserving recognition as a well-defined surgical condition. As to the etiology of these films and bands, it seemed most probable that they were the result of long-continued or oft-repeated mild infections of the peritoneal covering of the caecum and appendix transmitted through the intestinal wall. Flint after a series of observations on human embryos and infants at term, concluded that they are not the products of inflammation, nor are they due to the burrowing of the caecum behind the parietal peritoneum, but represent simply a more marked attachment of the large intestine to the posterior abdominal wall, or in some cases the more extensive fusion of the omentum to the colon. Flint further concludes that the condition is much more frequent than we have suspected; that in many instances it produces no inconvenience; that it is only after the supervention of other causes, as ptoses or inflammatory conditions,

that they become a source of disturbance and discomfort. Pilcher believes that the final solution of the origin of the conditions known as Lane's kink and Jackson's membrane will be properly represented by the sum of the views of inflammatory and embryonic origin.

After a review of the twenty-seven cases which Pilcher gives in detail, he makes the following deductions: "It would seem that sufficient clinical observation had now been accumulated to confirm and emphasize the teaching that right-sided pericolic membraniform veils and bands, crippling the peristaltic functions of the caecum and ascending colon, were of frequent occurrence, and that when present they form a condition which is always a menace to the future, and in many cases has already become the cause of ill health and suffering. Whenever, therefore, the abdomen is opened for the relief of conditions involving right-sided symptoms, the operation should be so planned as to make it possible to explore for their presence and do whatever is necessary for their removal."—L. S. Pilcher, *Annals of Surgery*.

RELATIONSHIP BETWEEN THE URINARY SYSTEM AND DISEASES OF THE FEMALE PELVIC ORGANS.—On account of its intimate anatomical relationship, the bladder is especially vulnerable to adjacent pathological conditions, whether it be neoplasm, infection, or displacement. Although it is true that in the majority of such cases, the bladder is the only part of the urinary tract affected and with the removal of the primary cause the bladder symptoms will be relieved, there is another large class of cases in which the involvement of the urinary tract is more sensitive, including the ureter and kidney; or disease of the urinary system may be merely coincidental with that of the genital tract. In diseases of the genitalia of whatever nature, the bladder is interfered with not only by distortion of its walls, through sacculation, pressure, or traction, causing symptoms of mechanical blockage, but also by actual and often extensive changes in the muscular and mucous coats. These changes are due either to infection or to impaired circulation caused by partial obstruction to the venous or lymphatic current. When the anatomy of the ureters is considered it is very evident that they must become involved in a certain percentage of cases and this can readily be proven, if appropriate examinations are made to determine it. The distal portions of the ureters as they pass through the parametrium, along the anterior vaginal wall and obliquely into the bladder, are the parts in which secondary involvement is most likely. The results of ureteral involvement fall into two groups—the one of purely mechanical origin, expressed by dilatation of the ureter and renal pelvis, and the other due to infection. The possibility of ureteral compression from massive new growths is commonly recognized, but that such an occurrence may be associated with other and more frequent anomalies is not properly appreciated. Maribeau claims that he has encountered several cases of dysmenorrhoea due to engorgement around the ureteral orifice causing obstruction and dilation of the ureter and renal pelvis. This factor may play a part in explaining the frequency of right-sided pyelitis. Changes in the bladder as the result of benign or malignant growths of the uterus are generally recognized and as the result of distortion of the bladder walls,

direct extension of a malignant growth, and impaired circulation due to pressure, these may be contributory causes at least of ureteral obstruction. Likewise pelvic infection may exert its influence not only on the bladder, but on the ureters and kidneys as well and during the stage of active infection, pyelitis and pyelonephritis may result from direct extension up the ureter. In cases of extensive prolapse of the uterus and cystocele, saculation of the bladder not only occurs, but the ureters are subjected to more or less torsion, contributing to partial obstruction and dilatation and also to their infection. It is therefore probable that in some cases of vesical symptoms there is an associated pyelitis even after operation has corrected the prolapse and cystocele. Uncomplicated retroflexion rarely causes sufficient distortion of the base of the bladder to bring about urinary disturbances, therefore it is always important to bear in mind the possibility of a primary disease of the bladder or kidneys which may be coexistent. Routine use of the cystoscope in all cases presenting bladder symptoms should be the rule as it is only in this way that grave errors in diagnosis may be avoided.—Clark and Keene, *Surgery, Gynecology and Obstetrics*.

CHOICE OF TREATMENT IN CHRONIC SUPPURATIVE OTITIS MEDIA.—By George L. Richards (*Annals of Otology, Rhinology and Laryngology*, September, 1913).—*First, in Children.*—The records of all the ear clinics where children are treated show that many of them seek treatment for chronic discharging ears. If stated to be due to frequent colds, the first thing to ascertain is the presence or absence of adenoids or enlarged tonsils, and then to correct any abnormal pharynx or naso-pharynx condition which may be evident or causative. Quite a number of cases clear up promptly with cessation of the discharge. Those which do not, and especially those due to exanthemata, usually show on examination a considerable loss of the drum membrane and adhesion of the ossicles to the inner tympanic wall. Such cases should be treated for a while conservatively and carefully by such thorough cleansing methods as appeal to the individual treating the case. While it is no doubt true, as William McEwan wrote many years ago, "that all cases of suppurative ear trouble are potential volcanoes," the fact remains that only relatively few of the actual number of cases either come to radical operation or die as a result of the disease.

What next is to become of these cases of suppurative ear trouble, which, after long and careful cleansing treatment, do not subside and do not clear up?

When there is a fair degree of hearing and the major portion of the drums remain, Richards thinks some type of conservative surgical operation should be adopted, provided cholesteatoma is not present. The question will very naturally be asked. "If the ear becomes dry, will it stay dry and will I hear?" This is largely a question of whether moisture, that is water, can be kept out of the ear. After an experience of some twenty years in treating these cases, the author is firmly of the conclusion that the drier we can keep them, the better and more rapid the results.

Second, in adults.—When we turn to adults, we are confronted with two classes of chronic suppurative middle ear; one with and one without cholesteatoma. Those without cholesteatoma may be handled somewhat

the same as suggested in children. The question of hearing is not usually of great importance, unless both ears are involved, since if the adult has one good ear, and seeks treatment for discharge for the other, which is practically deaf, he does not usually expect the restoration of hearing in the affected ear, which is apt to be poor, and from which the discharge has usually continued for months or years before relief is sought. A radical operation is then to be advised in many cases.

The question of conservative treatment in the cholesteatoma cases depends entirely on whether the opening is sufficiently large to allow the discharge of the cholesteatomatous mass. Where this is the case, and where the ear can be kept dry, even a cholesteatoma not infrequently can be successfully treated by conservative means. Where the opening is small and the cholesteatoma is moist, nothing short of a radical operation is to be advised.

In conclusion, the opinion is expressed that the pendulum at the present moment seems to have swung back from the time when operation was suggested for nearly every case of chronic suppurative otitis to a somewhat middle ground, where cases manifestly demanding it are operated upon, while many others are cured, or at least the process brought to a standstill, without operation. In the final analysis each case must be judged on its own merits, due consideration being given to all the factors in evidence.—*Post-Graduate*.

EDEMA IN EARLY LIFE.—It has long been known that local and general edemas, not due to nephritis, are occasionally seen in early life, but the causes of this condition have been variously explained. Dr. Henry Dwight Chapin, of New York, reported a series of 21 cases in the *Archives of Pediatrics*, January, 1914, in which various symptoms were noted and studied in their relation to the edema. Occasional traces of albumin and even hyalin casts were found in some of the cases—which was not due he states to the presence of an actual renal disease, but rather to an irritation of the renal tubules accompanying a slight congestion and having no special significance. The age of the cases varied from 16 days to 3 years. The condition of the infants was as follows: One was premature, 12 had malnutrition with digestive troubles, 2 were apparently healthy, 2 had broncho-pneumonia, one had pericarditis with effusion, 2 had otitis media and one had cerebro-spinal meningitis.

Location of Edema.—In four it was general, in 7 the ankles and feet were involved, in 2 in the face only, in one the right knee, left hand and left forearm were affected, in two both feet and hands, in one both wrists, in two the face and both feet, in one the face and abdomen and in one the scrotum and penis.

Blood Examinations.—Six cases showed mild secondary anemia. In no case examined was there any evidence of pernicious or profound anemia.

The stools were abnormal in 12 cases; 7 were fair.

Urine. In 19 cases the urine was examined with the following results: Albumin present in faint traces in 9 cases and heavy in one. It was absent in 9 cases, and sugar was not found in any of the specimens. Seven of the specimens examined showed occasional casts.

The duration of the edema was from 3 to 21 days. There were 7 deaths, three from malnutrition, two from broncho-pneumonia, one from cerebrospinal meningitis and one from pericarditis with effusion. In the study of these 21 cases it seems that neither the condition of the blood nor urine can satisfactorily explain the edema. The kind of cases that are apt to show this condition are as follows:

1. Cases of difficult digestion and malassimilation. Diarrhea can produce toxins that may induce vasomotor paralysis.
2. Various exhaustive conditions, such as prematurity, marasmus, extreme secondary anemias, edema neonatorum and in long debilitating diseases.
3. Various constitutional diseases, such as syphilis, tuberculosis, erysipelas, pertussis, etc.
4. Angioneuroses of vasomotor origin will explain the phenomenon in certain instances.

THE TREATMENT OF BRAIN TUMORS AND THE INDICATIONS FOR THEIR OPERATION.—Cushing (*Neurologisches Centralblatt*) says that because of the great improvement in the technique of brain surgery there are few cases of brain tumor that one would hesitate to operate. In general, radical operations are to be performed in those cases in which apart from the localization, the results depend upon the pathological nature of the growth and its behavior towards the surrounding tissue. With regard to the latter viewpoint, one distinguishes two groups, first, sharply circumscribed tumors, which press upon the brain substance without growing into it—sarcoma endothelioma, fibroma, angioma, cholesteatoma, dermoid tumors of the pia, solitary tubercles, gummatous growths and finally cysticerci and echinococci; and, second, infiltrating tumors—glioma and carcinoma metastastis. For a favorable outcome in the first group, the location is all important, whether extra or intracerebral. The prognosis in tubercle, gumma and cysticerci is unfavorable because of the multiplicity of their appearance. The prognosis in the second group is still worse because in an infiltrating growth the border is difficult of recognition. Endothelioma, sarcoma and neurofibroma offer the best opportunity for surgical success, and next comes cysticerci and echinococci which are diagnosed early. Tubercles are found most often at an early age and accompanied by general symptoms. Cholesteatoma, lipoma, dermoids, teratoma and angioma also occur most frequently in young persons. The location in the posterior cranial fossæ, in addition to their presence in the skin, speaks in favor of fibroma. Parasitic growths may often be recognized by lumbar puncture. Localization can best be made in tumors of the central convolutions, the pons and posterior and middle cranial fossæ, also, in the region of the speech centres and cerebellum. Apraxia speaks in favor of localization in the corpus callosum, while word blindness indicates the right temporal region. When the right frontal region is involved, a diagnosis is often impossible. When the tumor is situated in the brain stem, corpora mammillar, pons, medulla and third ventricle operation is contraindicated. In all other cases operation is to be recommended, although the percentage of complete recoveries is only three and four per cent.—*Charlotte Medical Journal*.

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S. M. REINHART, M. D., Chairman

TREATMENT OF DIABETES.

BY CLARENCE BARTLETT, M. D., PHILADELPHIA.

(Read before the Homœopathic Medical Society of the State of Pennsylvania, September, 1913.)

THOSE of us who have had opportunities for observing the results of the treatment of diabetes mellitus as practiced over twenty-five years ago cannot fail to make unfavorable comparison of the therapeutic methods then in vogue, with those of the present day. Tradition has kept alive the follies of the past, and notwithstanding the many valuable clinical articles bearing on the treatment of diabetes, old methods still prevail among a large proportion of practitioners of medicine and surgery, while still others disgusted with their inability to induce patients to follow the so-called necessary routine, have practically abandoned dietetic treatment as useless. Even at this late day, Dieulafoy, whose work on the Practice of Medicine is being lauded as an authoritative exponent of modern French practice, condemns the restricted diet in no uncertain terms. It is just to that author, however, to say that he seems to have taken no cognizance of the value of restricted diet as practiced with intelligence by those who individualize their cases.

Let us quote from the old authorities. No one will object to

the selection of Senator, who contributed the article on Diabetes in Ziemssen's Encyclopedia, published in 1877. To strengthen the force of his teaching, Senator employed italics liberally. After condemning in a most positive manner the practice of Piorry, who in 1847 advocated treatment by administration of a liberal supply of grape sugar as part of the diet, our author observes: "*On the contrary, therefore the withdrawal of grape sugar and of such substances as are converted into grape sugar on their way to the blood*, is to be obtained at any price. Could we wholly and forever abstract sugar and its formatives from the diabetic's food without doing harm to his nutrition, we should not only cure his disease, but we could make it entirely harmless. We can nearly attain this by replacing vegetable with animal foods, which are infinitely poorer in carbohydrates.

. . . Only one difficulty, but that a very palpable one in practice opposes its unqualified and exclusive employment: that is the repugnance which is soon manifested against the uniform diet, and the digestive derangements which are occasioned by the large quantities of meat necessary to meet the demands of nutrition." Later we find Senator recommending on the authority of Kuelz, certain carbohydrates as less injurious than others, and specifically mentioning inulin, which is now receiving the advocacy of a great modern authority, Dr. Strauss. Coming to the subject of bread, he truly observes, "it is hardest for the patients to do without bread, and yet it is for them one of the most injurious articles of food." Then he refers to gluten bread as of some use, and specifically mentions the product of one factory which turned out a gluten flour containing no more than two per cent. of carbohydrate.

And what was the result of this advice? A tabulated list of 88 cases collected by Griesenger gives an average duration of life after the discovery of glycosuria of only two and three-quarter years. No wonder the treatment fell into disrepute with profession and laity alike, and that in discussions before medical societies debaters really derided dietetic restrictions as almost criminal, and that diabetes came to be regarded as a terrible and rapidly fatal disease. Present day methods show an average duration of 12 years, and I personally know of cases which have lived for periods ranging from 8 to 18 years, and of still others who by reasonable care have been kept in *perfect health* for periods of from two to five years. Of course we cannot have perfect results in every case, but we can by

judicious methods do something for all cases excepting those which have arrived at the stage of acidosis.

It is well to disabuse our minds at the outset that diabetes is a specific clinical entity of determined pathology. We must accept the view that there is something more in it than pathological sugar excretion. At present, it is true that we cannot go much further than to prescribe suitable diet and hygiene; nevertheless we must individualize our cases by clinical study that we may determine ultimately in vivo the relative parts played by various anatomical structures, e. g., the fourth ventricle, thyroids, parathyroids, pituitary body, suprarenal capsules, liver and pancreas, in the production of the individual case. Evidence is rapidly accumulating too, that syphilis has an important etiological relation to diabetes. This fact recognized, establishes an important element of constitutional treatment should a Wassermann reaction be positive. In these investigations as to the organ at fault we should not lose ourselves in wild speculation because of the brilliant studies of the relations of the ductless glands to chronic diseases, and forget some of the old theories, but rather should we adopt the sound teaching of old in the light of present day knowledge. For example, it is no new fact to observe that disease of the liver can produce diabetes; but when we recall the modern observations that liver disease produces disease of the pancreas, we place the etiological relationship of cholelithiasis and cholecystitis to diabetes on a sound basis. This has been done by several surgeons, who on indications afforded by the clinical picture drained a diseased gall bladder with the result of causing a permanent disappearance of a glycosuria. Physicians have observed cases attended by a large liver due probably to hyperemia, in which treatment directed mainly to the cure of the associated digestive derangements and rest of the liver, has likewise caused a disappearance of the glycosuria.

Before outlining my own practice for which no originality is claimed, let me protest in the strongest terms possible against the use of the so-called diabetic foods, and especially of the gluten breads. Most of them have been determined to be arrant frauds, containing in some cases as high as 70 per cent. of carbohydrate as opposed to a maximum of 80 per cent. in the best wheat breads. The best of them contains 12.62 per cent. One very popular brand of diabetic flour contains 76.4 per cent. of carbohydrate. So dangerous are they that numer-

ous chemists in the interest of the public health have taken their analysis in hand under governmental supervision. Most of these foods are unpalatable,—decidedly so. As Mark Twain once said, “Diabetics must have a morbid fear of death and a terribly bad conscience to prolong life at the expense of eating such stuff.” The kitchen and the trained nurse and housewife under the supervision of the physician can do everything the food manufacturer can do and do it better. A recommendation of a diabetic food by a physician to a patient is a confession that commercialism is to be depended upon more than scientific study, and that he is too lazy to individualize the case.

On a par with the diabetic foods are the diabetic specifics so widely advertised the country over. If anything they are less harmful than the foods, now that the pure food and drug acts have placed severe restrictions on the sale of compounds containing certain dangerous drugs. All of them are absolutely useless, though lauded highly in their circulars. Their reputation has been attained by reason of the recommendation by the manufacturers that the patient follow a certain diet which is prescribed. Necessarily the nostrum with carbohydrate restriction is followed by a reduction in the excretion of sugar.

So great indeed has been the proprietary evil in the past, that even in the present day when we look askance at every new applicant for patronage, and manufacturers are correspondingly alert to do the right thing, we should still prescribe the proprietary food sparingly, if at all. I have seen so many excellent men tricked into endorsements that it now takes considerable to convince me of the value of such articles on the *ipse dixit* of the few, even though their recommendations have attained the distinction of textbook approbation.

We must bear in mind that the craving for carbohydrates is borne of a nutritional necessity. It is not the result of a restricted or monotonous diet. Carbohydrates must enter into the diet of all patients,—the diabetic as well as the non-diabetic. The great problem is to determine just how much each patient should have that he may maintain the maximum health for him. Our knowledge of the contents of standard foods enables us to study the patient's progress to a nicety. We cannot do this with special articles, the composition of which varies with the sweet will of the maker.

It is customary at the present day to divide cases of diabetes for clinical purposes into mild, severe, moderately severe, and

grave. It is necessary at the outset to assign our case to its class. Definitions follow :

A mild case is one in which the sugar disappears from the urine promptly (within 3 or 4 days) on the standard diet, and does not return on the daily allowance of four ounces of bread.

Moderately severe cases are those in which the sugar disappears promptly as in the preceding, but the patient exhibits tolerance for less than 2 ounces of bread.

Severe cases are those in which the sugar cannot be excluded from the urine.

Grave cases are those in which the urine contains acetone and diacetic acid in addition to sugar.

Whatever be the class to which our case belongs, the physician must pay the greatest attention to details himself. He must know that his instructions are followed out. Practically all failures are due to non observance of this injunction. It is my practice whenever possible to have my patient go to a hospital, where the scientifically conducted diet kitchen supervises everything, and then I KNOW that things are carried out as I wish them to be. The patient may object to the inconvenience and expense of the procedure, but after observing the routine, is well satisfied to continue it. So far as the patient himself is concerned, I make but two restrictions on his conduct: 1. That while out of the hospital for exercise he must eat nothing. 2. Should he find it necessary to urinate, he must collect said urine and bring it back to the hospital, to be added to the day's collection.

As to the value of the hospital in the treatment of these cases, I am becoming more and more convinced that cases treated therein give much better results than those treated at their own homes. There can be no question that the supervision of the diet and general management by a trained organization must give better results than without such trained organization. Aside from this there seems to be what we might call an undefinable something in the hospital or sanitarium life which strengthens the results. I know that in several instances where physicians who are always alive to the importance of little details and the readiness with which patients, however loyal, are remiss, have declared the elimination of sugar utterly impossible in given cases, and yet in several such, the sugar disappeared within 48 to 72 hours after dieting had begun. The restful life and the confidence engendered by ever present help

should trouble arise account for part of the result. The majority of cases thus helped relapse when they return to their routine existence.

Physical rest is an important part of treatment in the severe cases. With my friend, Dr. O. S. Haines, I am in hearty accord as to the danger of fatigue as an item in the production of acidosis. In one patient, absolute rest in bed resulted in the prompt disappearance of diacetic acid from the urine, and it remained absent until he returned to his work.

Before commencing the dietetic treatment, the patient should follow ordinary rules. A twenty-four hours' specimen of urine is to be collected and measured. The estimate of sugar is to be made, and special attention must be paid to the presence or absence of acetone and diacetic acid. The patient is now placed upon the von Noorden standard diet as modified for American usage by the physicians of Johns Hopkins Hospital. It is as follows:

Breakfast, 7.30.—200 cc. (3vi) of tea or coffee; 150 grammes (3iv) of beefsteak, mutton chop (without bone), or boiled ham; one or two eggs.

Luncheon, 12.30 P. M.—200 grammes (3vi) cold roast beef; 60 grammes celery (3ij); fresh cucumbers or tomatoes with vinegar, olive oil, pepper and salt to taste; 20c.c. (3v) whisky, with 400 c.c. (3xiii) water; 60 c.c. (3ij) coffee without milk or sugar.

Dinner, 6 P. M.—200 c.c. clear bouillon; 250 grammes (3viiss) roast beef; 10 grammes of butter (3ijss); 80 grammes (3ij) green salad with 10 grammes (3ijss) vinegar and 20 grammes (3v) olive oil, or three tablespoonfuls of some well-cooked green vegetable, three sardines a l'huile; 20 c.c. (3v) whisky with 400 c.c. (3xiiij) water.

Supper, 9 P. M.—Two eggs; 400 c.c. (3xiiij) water.

Numerous other standard lists have been recommended by various writers. All that I have seen of late publication are most excellent, although their invention impresses me as dependent upon the wish of their originators to have something just different from other authorities. Such lists may, however, serve useful purposes. I have had the singular experience of observing one of these to succeed in clearing the urine of sugar when the von Noorden list failed. Again they may be useful when patients are prejudiced against the von Noorden standard by reason of an unfortunate experience with it under a

previous attendant, or it may be that the patient's preferences may be so strongly in favor of one of these that he follows directions more carefully.

Janeway's diet list in use at the Presbyterian Hospital, New York City, is as follows:

Breakfast.—2 eggs; ham, 90 grm. (3 oz.); coffee with 45 grm. ($1\frac{1}{2}$ oz.) cream; butter, 15 grm. ($\frac{1}{2}$ oz.) on the biscuit during the test period; cooked with the eggs if no biscuit or bread is taken.

Luncheon.—Meat, 120 grm. (4 oz.); green vegetables from list, 2 tablespoonfuls; white wine, 2 claret glasses (6 oz.) or whisky or brandy, 1 oz.; butter, 15 grm. ($\frac{1}{2}$ oz.), with the green vegetable if no biscuit or bread is taken.

Afternoon tea with 15 grm. ($\frac{1}{2}$ oz.) cream.

Dinner.—Any clear soup; fish, 90 grm. (3 oz.); meat (beef, turkey, or chicken) 121 grm. ($\frac{1}{4}$ lb.); green vegetables from list, 2 tablespoonfuls; salad with 15 grm. ($\frac{1}{2}$ oz.) oil in the dressing; cream cheese, 30 grm. (1 oz.); white wine, 6 oz.; whisky or brandy, 1 oz.; demi-tasse of coffee; butter, 30 grm. (1 oz.) on the fish, meat, and green vegetables if no bread or biscuit is taken.

Bed Time.—Bouillon with 1 raw egg.

Bassler's standard diet is as follows:

Breakfast.—Coffee with $1\frac{1}{2}$ oz. of cream; 2 eggs with $\frac{1}{2}$ oz. of butter; bacon, 1 oz.

Luncheon.—2 eggs; bacon, 1 oz.; 2 ounces of lamb chops, ham, steak, chicken, or fish broiled with butter ($\frac{1}{2}$ oz.); vegetables from list; wine, 6 oz., or whisky, 1 oz. with water.

Dinner.—Any clear soup; 4 oz. of roast pork, beef, mutton, turkey, chicken, lamb; green vegetables; salad with half oz. of oil dressing; 1 oz. of cream cheese; wine, 6 oz.; whisky, 1 oz.; coffee.

Before starting in with the selected diet, it is absolutely necessary to make an accurate estimate of the daily excretion of sugar as determined by the examination of a 24 hours' specimen of urine. At the same time, the determination of the presence of acetone and diacetic acid must never be overlooked. When instituting the strict diet, we may adopt one of two courses. The plan I have usually employed is that of placing the patient on the strict diet. This plan is open to the very important objection of precipitating a diabetic coma in severe advanced cases, but inasmuch as such cases present their ser-

ious nature almost at a glance, and can therefore be recognized, I have not felt the objection thus urged. Even in these with the patient in bed at absolute rest, we may presume to run some risk to save valuable time, if we have the patient in hospital and under constant medical supervision. The other plan is that of withdrawing from the regular diet one carbohydrate food stuff after another until in the course of a few weeks the patient is on a strict diet or until the urine becomes sugar free.

It is the usual experience in the mild cases to find the glycosuria diminish markedly within 24 hours, and to disappear entirely within 72 hours. The general run of authorities recommend that the carbohydrate free diet be maintained without modification for a period of from one to three weeks, at the end of which time we should begin to test the patient's tolerance for starches (carbohydrates). No doubt this is sound advice, possibly the best course. When, however, the time element is important to the patient, it is my rule to begin two days after the disappearance of the glycosuria to give the patient one ounce of good wheat bread. If no sugar appears in the urine after two days, I raise the quantity of bread to two ounces on the third day, and if there is still no sugar, then to three ounces on the fourth day; and so each day the daily quantity of bread is increased by one ounce until the glycosuria returns. Thus we determine the patient's tolerance in terms of bread. With this discovery, we are now ready to advise patients as to their permanent diet. This diet must be sufficiently generous to maintain bodily weight, or even to raise it to the normal standard of the individual, to give the patient a sense of well being by removal of symptoms, and if possible to keep the sugar permanently from the urine. Usually the amount of carbohydrate food to be allowed is the equivalent of two-thirds of that which re-established the glycosuria when determining the tolerance. It is not intended that the entire supply of carbohydrate permitted shall be taken as bread. On the contrary, the patient demands variety.

The carbohydrate content of foods may be stated in a more general way as follows:

Food containing 5% or less of carbohydrate: Lettuce, spinach, sauer-kraut, string beans, celery, asparagus, cucumbers, Brussels sprouts, sorrel, endive, plain pickles, ripe olives, grape

fruit, cauliflower, tomatoes, rhubarb, egg plant, leeks, beet greens, watercress, butternuts, clams, scallops, and fish roe.

6% or less: Cabbage, radishes, pumpkin, kohl rabbi, oysters, liver.

10% approximately: Onions, squash, turnip, carrots, okra, beets, mushrooms, lemons, oranges, cranberries, strawberries, blackberries, gooseberries, peaches, pineapple, watermelon, muskmelon.

15% approximately: Green peas, artichokes, parsnips, canned lima beans, apple, pears, apricots, cherries, currants, raspberries, huckleberries, pecans, filberts, walnuts, pistachios, and beechnuts.

20% and over: Potatoes, shell beans, baked beans, green corn, boiled rice, boiled macaroni, plums, bananas, and almonds.

While we use bread as a unit of carbohydrate tolerance, we must not lose sight of the fact that such a procedure is not strictly accurate, for patients do not exhibit the same degree of tolerance for the particular starch in the various kinds of foods. Bread, however, is both convenient and safe as the standard, for after all it is the one carbohydrate food that patients must have. The fact that some patients exhibit a greater tolerance for potatoes, rice, oatmeal, etc., respectively, is capable of two explanations: In the first place there is a standard relationship as to the sugar producing power of these foods dependent upon their carbohydrate content, which is an invariable quantity, and which may be used as a guide in extending the patient's diet. Secondly, there is an inherent something peculiar to the carbohydrate element of these foods in relationship to another peculiar something in the patient, which makes the patient decidedly more tolerant of one carbohydrate food than another. We must recognize this latter fact, though the number of patients to whom its practical adaptation is possible is not large. It is of sufficient importance, however, to place the so-called potato cure, the oat-meal cure, and the rice cure on a recognized basis. We may if we feel that the case demands such an investigation determine the patient's tolerance for the starches of various important foods, as potatoes, rice, and oatmeal. Personally, I have not gone to this extent in a single instance.

Next comes a period when the patient must be educated, and this after all is the great element in securing permanent

results. Can the patient be trusted? If not, has he a sensible wife? And if not that, permanent results demand careful medical supervision at short intervals for many months. We must then outline in most dogmatic fashion a definite list to be followed between consultations. This list should not follow the outrageous practice so common among physicians of giving patients a list containing the names of foods, the majority of which the average patient has never heard, under two headings, viz: "Must take," "Must not take." But it should prescribe in no unmistakable terms the foods which must be taken, their method of preparation in the kitchen, and their daily quantities. Especially are the lists of "May take" and "Must not take" pernicious if they are of the stereotyped variety emanating from the laboratories of the wily manufacturer. Many a practitioner has spoiled the faith of his diabetic patients. Worse than this, he has made him the victim of doubt as to the efficiency of physicians in general, and the devotee of quacks and irregular practitioners.

About once in a month or six weeks it is a good plan to have the patient return to a strict carbohydrate diet. After about six months it is well to test his tolerance once more. As a rule, this will be found to be increased. It will thus be seen that the management of a case of diabetes involves a period of months, and possibly of two or three years. If everything goes well, there will come a time when the patient's ability to assimilate carbohydrates has increased so that his diet may be made more generous, and finally he need practice only ordinary precautions. Under no circumstances should he indulge in sweets, and as to starches, he must observe wise precautions. It will also prove to be a good plan for him to be on restricted diet at periods to be named by his physician.

One encounters great difficulties in overcoming the prejudices and whims of neurotic diabetics, who unfortunately constitute a large proportion of the cases. By securing the confidence of the patient, we can readily enforce the rigid diet for the few days necessary to secure good results, after which time, the improvement in the patient's feelings will remove any further difficulties. Many of this class can be managed successfully only in the hospital, and relapse as soon as discipline is removed. Likewise we have to cope with a peculiar mental state common among persons suffering from chronic or intractable diseases, namely a lack of subservience to system and dis-

cipline should relapse follow indiscretions. They say what's the use of trying if indiscretions are followed by relapses, which is just as unreasonable as refusing to wash one's face because it will soon be as dirty as before. Usually such persons are brought to a sense of reason after a good scare.

Severe cases of diabetes offer a much more difficult problem. While it is evident that the excreted sugar must be formed from proteid food, physicians commonly overlook this fact. Indeed it seems that the patients are more intolerant of the carbohydrate derived from proteid food than that already existing as such when ingested. Such patients must be prescribed a diet with limited protein. The following from the Presbyterian Hospital (New York) is good:

Breakfast: 2 eggs; bacon, one-half ounce; coffee with one and half ounces of cream; butter, two-thirds of an ounce

Luncheon: 1 egg; bacon, one-half ounce; meat, 2 ounces; salad with one-half ounce of oil in the dressing; white wine, 2 claret glasses, or one ounce of whisky or brandy; butter, one and one-third ounce.

Afternoon tea with one-half ounce of cream.

Dinner: Any clear soup; meat, 3 ounces; vegetables from list, 2 tablespoonfuls; salad with one-half ounce of oil in the dressing; cream cheese, one ounce; white wine, 6 ounces, or whisky or brandy, one ounce; demi tasse of coffee; butter, one ounce.

Bedtime: Bouillon with 1 raw egg.

With patients of this class, it is a safe plan to place them at rest, not only because of the influence of fatigue in the production of acidosis, but also because abstinence from exercise lessens the amount of food necessary for the maintenance of a proper balance of waste and repair. It is always a good plan to give cases of this class a certain amount of sodium bicarbonate, generally about one ounce daily. This should always be sufficient to render the urine alkaline. In carrying out their dietetic treatment, due attention should be paid to lost nourishment brought about by excretion of sugar by the urine. Every gramme excreted means a loss of 1.1 calories. This loss may be made up by the addition of a certain proportion of fat. Alcohol is especially important, each gramme of which administered means the addition of 7 calories to the intake; but not more than 40 grammes (one and one-third ounces) of alcohol should be taken daily. As the alcoholic content of the various

liquors varies with each, the physician should acquaint himself with the necessary data for their regulation. Thus whisky and brandy contain 40 per cent. alcohol; gin, 20 per cent., etc. It is not uncommon for these patients to present sugar free urine after several weeks of this treatment.

Von Noorden in generalizing the cases demanding limited protein intake advises restriction of the daily quantity of meat to 6½ ounces (200 grammes). Of other proteids he advises the albumin of eggs and vegetables, as they are better tolerated than are meats. In many instances, he believes it wise to interrupt the periods of such dietetic system by interpolation of two or three days, during which the patient subsists upon green vegetables.

Another plan in the severe cases is to alternate periods of restricted diet with longer ones, during which the patient takes a more liberal variety of foods. By this course followed over many months, we may increase the patient's tolerance, so that eventually the case may be relegated to the class of mild cases, though this happy result is not usual.

Green Days.—Frequent reference has been made to the so-called green days. The advantage of this temporary diet is that it gives a rest to the metabolic functions, and raises the tolerance of sugars made from proteins. The articles comprising the list for the day include black coffee, bacon in small quantities, one or two eggs, spinach, lettuce, asparagus, tea, and whisky (the latter in small quantities). The nutritive value of such a diet is very low, representing as it does less than 800 calories. It is often sufficient to remove the glycosuria temporarily.

The following is a sample diet list for a green day as proposed by Janeway:

Breakfast: 1 egg, boiled or poached; cup of black coffee.

Dinner: Spinach with hard boiled egg; one-half ounce of bacon; salad with half ounce of olive oil; 4 ounces of white wine or one ounce of whisky or brandy.

4.30 P. M. Cup of beef tea or chicken broth.

Supper: 1 egg, scrambled with tomato and a little butter; bacon, one-half ounce; cabbage, cauliflower, sauerkraut, string beans or asparagus; white wine 4 ounces, or one ounce of brandy or whisky.

Bassler, without specifying the periods at which the various foods should be taken, presents the following, which after all

is only a summary of the Janeway green-day diet: 3 eggs; black coffee; one ounce of bacon; any green vegetables; any broth or clear soup; three ounces of whisky.

No matter what the type of the case under treatment is supposed to be,—whether of the mildest or the most severe,—attention must be maintained on the possibility of acidosis as exhibited by the appearance of the acetone bodies in the urine along with the disappearance of sugar. As a matter of fact the appearance of the acetone bodies in the urine is capable of taking place in perfectly healthy individuals undergoing a carbohydrate free diet. It is therefore quite natural that the same thing should occur in the diabetic. So long as the presence of the acetone bodies is within reasonable limits, the symptom should occasion no concern. As a rule the acetone disappears within a few days, eight or ten at the most. If, however, it should appear in greater than normal quantities or diacetic acid should be present the rigid diet is not indicated, and should be discontinued forthwith.

. In the moderately severe cases, it is difficult to lay down any hard and fast rules in advance. It is usually the best plan to alternate periods of restricted diet with longer ones in which the patient takes a more liberal variety of foods. By this course followed over many months we may increase the patient's tolerance, so that eventually the case may be relegated to the class of mild cases, though this happy result is not usual. We may interrupt the period of more liberal diet by a so-called green day. The advantage of this temporary diet is that it gives a rest to the metabolic functions, and raises the tolerance for sugars made from proteins. The articles comprising the list for the day include black coffee, bacon in small quantities, one or two eggs, spinach, lettuce, asparagus, tea, and whisky in very small quantities.

The severe cases of diabetes, i. e., those in which proper dieting fails to eliminate the excretion of sugar, and at the same time the acetone bodies appear in the urine to a disquieting amount, demand the closest possible supervision. The probability of good results are not very flattering, so that one should not be disappointed if failure ensues. It is important in all of these cases to pay attention not only to the intake of carbohydrates, but also to the quantity of meat consumed. Von Noorden is emphatic in stating that the latter should be restricted to 200 grammes daily. Of other proteids, the albu-

men of eggs and vegetables should be advised as they are better tolerated than are meats. This plan of dieting should be interrupted from time to time by periods of two or three days during which the patient subsists upon green vegetables. With such a restricted diet there is always a danger of exciting the acid intoxication of grave diabetes, to avoid which it is sometimes necessary to prescribe large doses of sodium bicarbonate. With most cases of severe cases coming under dietetic treatment, the acetone bodies continue to increase for a week, after which they gradually grow less. At the same time the patient improves in health and strength. If everything goes well, the problem at the end of the third week becomes simplified, for then we can permit the patient to take moderate quantities of carbohydrates. We must, however, make careful experiments to determine which of the latter class of food stuffs is better tolerated. In all cases it is necessary to be ever on guard lest the quantity of proteid be too great.

As to the carbohydrate to be allowed, bread should be the one selected if it is fairly well tolerated. The substitution of gluten bread and other diabetic foods offer a poor substitute. If wheat bread is inadmissible, it is better to try some other carbohydrate, as rice, potato, or oatmeal. Of these special carbohydrate cures, that with oatmeal has been well systematized by von Noorden.

*Oat Meal Days.**—Porridge made from oat meal, 8 oz. of butter (8oz.), salt and pepper to taste; black coffee; light white wine, one-quarter litre (8 oz.), or cognac, 2 oz. The whites of 6 eggs may be added to the porridge if desired. The entire diet consists of protein, 63 grm. (2 oz.), nitrogen, 16.8 grm. ($\frac{1}{2}$ oz.); carbohydrate, 170 grm. (5 2-3 oz.); fat, 212 grm. (7 oz.); total calories, 3300.

It appears to be advisable to let a few days of restricted diet or even two vegetable days precede the oatmeal days, for when it supervenes immediately upon a mixed diet, the desired effect follows rather late.

At the commencement of the oat cure treatment, one notices even in the most favorable cases an increase of the glycosuria; but after a few days the sugar excretion diminishes, and the acetonuria even more so. During the oat meal day, the urine may often be quite free from sugar, and if it is not entirely free one may be fairly certain that it will be so in the succeed-

*Presbyterian Hospital (N. Y.) Diet Lists.

ing vegetable days. The cases in which this treatment is beneficial are without exception examples of the more severe types of diabetes, many of them in children and young adults. During the continuance of the treatment no carbohydrate other than the oat meal should be permitted.

Throughout the course of the treatment no matter what may be the plan adopted, close watch should be kept upon the patient's weight, for no course of treatment can be regarded as progressing favorably if the patient's weight is not maintained or is increasing.

Of the food substances to be utilized to prevent loss of weight the easily digested fats, as butter, olive oil, and cod liver oil are the best. They are better tolerated if small quantities of whisky are given. In fact the alcohol is necessary in the majority of cases, though always in relatively small doses. If necessary as much as 5 ounces of one of these fats may be given daily. They can be incorporated with other foods very readily, thus making their ingestion an easy matter.

Should acidosis develop, treatment must be energetic. At the best, the result is doubtful. Sodium bicarbonate should be given in as large doses as possible, and by mouth and rectum. It may in desperate cases be given intravenously. Personally I have never seen any permanent results. If we succeed in bringing about a temporary return to consciousness, we have accomplished about all to be expected.

In conclusion, I would say that diabetes is a disease of such manifold pathology and multiform clinical phases, that no set rules can be formulated to apply to all cases. We do know that judicious dieting brings about a practical recovery in many instances. We have learned that injudicious dieting is worse at times than no restrictions whatever, indeed that the rigid restrictions of Senator do more harm than the more careless use of carbohydrate foods. We do know that diabetes can originate in disease of more than one organ, but as yet we are unable to utilize this knowledge therapeutically. In many instances the results are brilliant; in others they are the reverse. Thus far we cannot say how good the results will be in any given case, until we have tried by intelligent practice. One might think cases with two attacks of gangrene or advanced retinitis would prove unmanageable, and yet I have seen cases with each of these complications yield to management.

There has been too much respect paid to the traditions of the past. Because they were ground into us, and because we have found them useless, we have become discouraged instead of starting out on the present day common sense grounds. However bad a case of diabetes may be, it has to be *very bad* not to be capable of some amelioration, those with advanced acidosis excepted.

SANITARY ENTOMBMENT.

BY

S. W. S. DINSMORE, M. D., SHARPSBURG, PA.

THE progress of civilization has been so rapid in the last decade, that sanitation has taken into account almost every problem of the living. The protection of the public through laws, preventing the adulteration of food and drugs, the quarantining of those afflicted with contagious or infectious diseases, whole cities and zones of territory have been freed from contagious and infectious diseases and made healthy abodes for man, where in the past, pestilence and death reigned, and human progress was at a standstill.

The best instances are the city of Havana, Cuba, and the Canal Zone, which are examples of what man has done, and what can be done to overcome the barriers that nature has placed in the way of human progress. And in our own community, the building of sanatoria for the tubercular, and hospitals for all most every known contagious disease, to say nothing of the spreading abroad among the people of a general knowledge of sanitation.

Elbert Hubbard says: "Oral righteousness is one of the first elements in the upbuilding of civilization." I need not go through the whole catalogue of sanitation and prophylaxis to a society of physicians, as they rightly receive the credit for the initiative of the views and methods for the physical salvation of the people. They are the true altruists, as most other men devoting their time and means to the betterment of the health of the people are doing so with the hope of some betterment either in money or in fame, but the physician sees only a vanishing clientage for his efforts.

While so much has been said and done for the health of the

people, the whole subject of sanitary burial, or, in more modern language, sanitary entombment, is as yet in its infancy. That earth burial contaminates the air, the earth and the water is true beyond a doubt.

The American Medical Association took this matter up at their meeting in St. Louis in 1906, and appointed a committee to investigate and, if possible, find a way other than the present custom of earth burial. I have looked through several of their journals, and while no doubt a report was made, I have been unable to find it. So far, I am not aware that our school has given the subject the attention that it deserves, but if nothing has been done in the matter, it is time we place ourselves on record, as being abreast of the present day sanitation and civilization; it seems to me the one all important subject yet left to chance.

Cremation has had a limited number of adherents for the past thirty years; though there are records of sporadic cases going back to the dawn of history, statistics show that at the present time there is one cremation to fifty thousand earth burials. As a sanitary method of disposing of the bodies of the dead, it is ideal, but to refined and civilized people it is repugnant and horrifying. Who but revolts at the idea of flames consuming the earthly remains of our loved ones! The grave or earth burial as the last resting place for the body has been sanctioned by time, and hallowed by sentiment, but it never has fulfilled the requirements of the modern ideas of sanitation, nor does it satisfy the rules laid down in other matters pertaining to the health of the whole people, and it surely does not assuage our sorrows to put the bodies of our loved away in the damp earth, there to become the prey of the loathsome creatures that consume it. We cling to the custom because our predecessors practiced it, and around the grave Time has cast a halo of reverence, into which we are slow to intrude. It is hard to find the beginning of the custom, but it must have been prior to the time Abraham laid the body of Sarah in a grave dug in the field of Ephron nearby the cave of Machphela.

This method of disposing of the dead being cheap, on account of waste or idle land being plenty, accounts for its popularity at that time, and in all sparsely settled communities since then. But has it ever satisfied the minds of those who have given it consideration? I think not. In Greece, the land of culture and the home of art, it was a mark of infamy to be buried in the

ground; some form of entombment was allowed to all but slaves and criminals, and here in the United States we have not permitted our own illustrious dead to smoulder beneath the sod.

Grant, Garfield, McKinley and Lincoln, of our Presidents, have been entombed in Mausoleums that are the pride of the nation; in other civilized countries we find what amounts to national mausoleums provided for their Kings, or those of their citizens who have acquired distinction in war, or in the arts and sciences. England has its Westminster Abbey; France has its crypts des Invalides; Italy the Catacombs and St. Peter's; Spain its Escorial, and other nations have buildings set aside for those they wish especially to honor. And as the earth becomes more densely populated, the demand for more and more space for cemeteries and burial grounds becomes greater; the danger of infection and contagion increases progressively.

Who of us who have opened a coffin a month or a year after burial has not been horrified by what we find therein.

This whole subject was brought home to me recently, and I wondered that so much advance was being made along other lines of human endeavor, and so much, in other words, being done for the living, and so little for the dead. So much advance along other lines, and yet in this important measure, we are still treading in the footsteps of our forefathers.

Like most people, physicians included, I had given this subject very little consideration. But, after having the real condition following earth burial brought to my attention by a personal experience, I could not altogether lay the subject aside. Nor do I think any one can who looks carefully into it.

On further investigation of this subject, my attention was drawn to the methods known as the "Better Way." And pursuing the matter still further, I find this method meets all modern requirements of sanitary entombment, for the living, and every sentimental requirement, for the dead. A beautiful marble palace itself requiring but a small space of ground, wherein the body may lie until the Resurrection Morn, or until Time shall have ceased to be. There need be no fear of molestation by the onward march of civilization. Entombment that fulfills all possible sanitary laws and yet comes within the reach of the "common people," where we may be laid away in a more beautiful and sanitary manner than the kings of past centuries. The wealthy, too, achieve a much less sani-

tary and beautiful entombment, spend thousands of dollars and yet do not obtain the results that come through this modern and beautiful method, as they have no means of drainage or fumigation—the coffin or casket being merely placed in a stone or marble vault and left there to decay, while in this modern method a bed of quick lime receives any drainage that may occur, and a forced stream of formaldehyde gas acts as a preservative to the casket and its contents.

A series of steel enameled tubes protruding through the end of every crypt allows formaldehyde gas to be pumped into a tube opening into the coffin or casket from a reservoir in the walls of the building, thus every coffin or casket is flushed with the gas every day, or as frequently as experience has proven it to be necessary.

In many of the cities of the East and West Mausoleums are being erected on this new, sanitary plan, and as Pittsburgh has always kept pace with modern achievements I see no reason why we should not adopt this method of entombment that has proven itself so far in advance of the present method of earth burial.

I would like every physician in this city and State to become interested in this method of sanitary entombment, and I feel sure that to see is to be convinced of the fact that it is the only method so far devised that meets every requirement of sentiment for the living and sanitation for the dead.

Mausoleums will be erected in Pittsburgh in the near future—within the next year or two—and for that reason I would like the physicians of our school to be in the front rank of those who are bringing about a so much needed measure for the protection of the living, and a permanent and beautiful resting place for the remains of their dead.

VACCINE TREATMENT OF GONORRHOEA IN WOMEN.—Heymann and Moos (Breslau) have published their experience with vaccine treatment of gonorrhœa in women in a series of cases, and they concluded that in vaccine therapy we do not by any means possess a cureall. In cases where the urethra and endometrium were affected the remedy failed entirely, as well as in old pyosalpin. In recent inflammation, besides some failures there were a series which showed improvement, but the best results occurred in joint affections. They, therefore, recommend the use of arthigon, the preparation employed in the latter class of cases, and in the complications of gonorrhœa.—*Monatsschr. f. Geb. u. Gyn.* Vol. 37-623.

TUBERCULOSIS IN CHILDHOOD.

BY

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(Read before the Homœopathic Medical Society of Pennsylvania, Bedford Springs, Pa. September 2, 1913.)

TUBERCULAR infection in childhood and pulmonary tuberculosis in the adult are now recognized as being intimately related. Many writers upon the subject of tuberculosis refer to consumption as "tertiary tuberculosis" in order to emphasize the fact that it does not develop primarily from a recent infection. It has been proven by experiment upon animals that repeated infections are necessary to produce a cavernous lesion in the lungs. A single infection, if it be of sufficient virulence to kill the animal sets up an acute miliary tuberculosis of general distribution. Cautious, non-fatal inoculations, however, followed by reinoculations will induce a pathological picture corresponding to pulmonary consumption.

The same results are found in man and can be proven by a clinical and pathological study of tuberculosis in children. In the infant we encounter practically only the disseminated miliary form of tuberculosis which we see in the inoculated laboratory animal. As the child grows older, however, and its resistance to infection increases the clinical manifestations of tuberculosis grow milder in type. In fact the child may become infected with repeated minimal doses of bacilli and develop a certain degree of immunity to tuberculosis. This immunity, however, is only partial; it is doubtful whether the human being ever becomes entirely immune to the tubercle bacillus.

Childhood, therefore, is the age of latent and of localized tuberculosis, e. g., tuberculosis of the glands, bones and joints. It is true, a goodly number of acute fatal cases of tuberculosis are encountered and are in fact characteristic of this age, notably tubercular meningitis. Nevertheless, a striking and significant fact is the high percentage of "latent" tuberculosis which develops during childhood. In other words, children become inoculated with the tubercle bacillus, but the majority of them do not show any clinical signs of tuberculosis. However, the seed is sown for future trouble and it requires but an exciting cause such as an attack of measles to lower the child's na-

tural resistance and the infection becomes active. In later life, long hours of confining employment; insufficient food; unhygienic surroundings and exposure leading to reinfections, offer the necessary requirements for the development of consumption.

We are indebted to v. Pirquet for the discovery of a safe and ready method of demonstrating latent tubercular infection, a method especially adapted to a study of tuberculosis in children. By means of his cutaneous tuberculin reaction we can positively establish the presence of a tubercular focus in the child, whether it be active, latent or healed, for the reaction is present some times even in healed lesions owing to the presence of immune bodies in the tissues.

V. Pirquet found that in a series of 1,134 children, in Vienna, clinically non-tuberculous, the reaction was found in percentages which rapidly rose, almost with step-like regularity, from 15 per cent. at two years to 90 per cent. at fourteen years. Mortality figures in tuberculosis strangely contrast with these findings. Death from tuberculosis in childhood is highest in early infancy. This is due to the infant's close proximity to the parent or nurse who may have tuberculosis and its close confinement to the house. Also to the fact that infection at this age tends to become rapidly general.

The mortality rate falls decidedly after the third year and the lowest figures are reached between the fifth and tenth years. It does not materially rise again until the time of puberty at which epoch pulmonary phthisis begins to play an important role.

How does the child become tubercular? All signs point to infection by way of the respiratory route, the source being an individual with open tuberculosis. Other forms of infection occur but they are rare. Of these infection through the alimentary tract is of first importance. Primary intestinal tuberculosis is far less common than primary pulmonary infection, the chief reason perhaps being that it requires an enormously larger number of bacilli to set up an infection when the bacilli enter by way of the alimentary tract than when they are inhaled, as proven in animal experiments. No doubt the same condition holds good in the case of the human being. The milk supply evidently plays an important role in the etiology of intestinal tuberculosis and the bovine type of bacillus has been identified in such cases.

Infection may take place through the mouth and tonsils and this explains the mode of occurrence of cervical and sub-maxillary tubercular adenitis. In cases showing involvement of the supra-clavicular glands there is an associated apical pleurisy.

The bronchial glands, however, are the site of the infection in the great majority of cases irrespective of whether the child is clinically tubercular or non-tubercular. It is the consensus of opinion among many pathologists, basing their opinions upon a large post-mortem experience, that the changes in the bronchial glands are secondary to a focus in the lung. This could not well be otherwise judging from the course pursued by infection with the tubercle bacillus observed in other regions of body and experimentally produced in animals.

V. Baumgarten called attention to the fact that a primary lesion always develops at the site of infection with the tubercle bacillus. This lesion shows but slight tendency to heal and when it does heal a scar or caseous area remains. Exceptions to this rule occur; for example bacilli may penetrate the intestinal mucosa and reach the mesenteric glands from which they may be recovered, as demonstrated by Bartels. In such cases, however, there are no clinical signs of tuberculosis nor do the lymphatic glands show characteristic histologic changes; in other words, we are here dealing with a latent tubercular infection. V. Behring taught that the regular mode of infection was through the intestinal mucosa, the bacilli being taken up by the lacteals and swept into the venous circulation thus reaching the lungs by way of the pulmonary artery. We may grant the possibility of such a mode of infection, but the anatomical evidence gleaned from hundreds of autopsy findings, namely, the almost universal presence of a circumscribed primary lesion in the lung with advanced changes in the bronchial glands indicates that the respiratory route is the usual route of infection.

Another fact facilitating the study of tubercular infection is the behavior of the lymphatic glands in the vicinity of the inoculation. According to the law of Cornet the regionary lymphatic glands are invariably the first to be involved; therefore, the primary lesion is always indicated by the glands showing the most advanced tubercular changes. In fact, if an animal be inoculated a second time with tubercle bacilli there will not be the typical adenopathy observed with the first inoculation.

As the bronchial glands show the most advanced changes in the majority of autopsies, belief in the preponderance of respir-

atory infection is justified. When the chain of glands on the right side is involved a primary focus can be found in the right lung and vice versa. Infection of both chains can only occur when there is a primary lesion in both lungs.

Bronchial gland tuberculosis is therefore the most important clinical variety of tuberculosis in childhood. If such an infection be latent it can only be suspected from the presence of a positive v. Pirquet reaction. Enlarged bronchial glands can, however, often be demonstrated by percussion and auscultation, according to the method of D'Espine. I shall quote from an original article by Prof. D'Espine in which he describes his method:

"I cannot sufficiently emphasize the practical importance of the method of examining the bronchial glands in the differential diagnosis in the child between simple anaemia and lymphatic anaemia of tuberculous origin, in order to select the cases for the seaside and mountain sanatoriums.

"The special sign which permits us to diagnose the condition at an early period is based on the auscultation of the changes in the voice sounds at the level of the seventh cervical or first dorsal vertebrae. This posterior glandular region, so well described by Gueneau de Mussy and his pupil Barety is that most often and earliest attacked by tuberculosis, corresponding to the first part of the trachea; the bifurcation of the trachea, where large caseous glands are often found, corresponds in horizontal section to the third dorsal vertebra. The sign is most obvious when one makes the child speak or count in a low voice. The voice is then accompanied by an added whispering sound localized to one or two vertebrae, or possibly extending to the fourth or fifth. A bronchial quality of the respiration at the same place has the same diagnostic value as the whispering sound. One must be content with this, if the child is too young to speak, but the bronchial breathing is a sign of enlargement already more considerable and more extensive. It is the same with vertebral percussion, which I have also described in my paper at the Academy, 1907. A definite dullness at this level coincides invariably with a loud bronchophony, and is pathognomonic of the presence of a large glandular mass, uniting the trachea with the vertebrae.

"Dullness at the level of the manubrium has been long recognized as a sign of enlargement of the bronchial glands. It is,

nevertheless, much less frequent than the vertebral dullness.”
—(*British Med. Jour.*, Oct. 15, 1910.)

Enlarged bronchial glands may also produce obvious symptoms, the recognition of which makes the diagnosis possible independent of physical diagnosis and the cutaneous reaction. The symptoms referred to are a high pitched metallic cough associated with expiratory dyspnoea. This syndrome is only typically seen in infancy at which age the presence of tuberculides is also a frequent aid in the diagnosis of tuberculosis. The tuberculides referred to are small hard papules, about the size of a pin head, bearing a central depression. They are scant and may be found upon the trunk or extremities. Their clinical importance was first pointed out by Hamburger, an associate of Pirquet's

Owing to the great prevalence of tuberculosis and the variety of clinical forms which it may assume we should always bear it in mind in the presence of obscure fevers and internal diseases. The mistake, however, is often made of ascribing to tuberculosis recurring or continued fevers due to sepsis, especially empyema, rheumatic infection and intestinal autointoxication.

Pulmonary tuberculosis in childhood is more likely acute and disseminated than chronic as in adults. Some of the characteristic features of miliary tuberculosis and tubercular bronchopneumonia are a degree of cyanosis and dyspnoea strikingly out of proportion to the physical signs present and greater involvement of the apices than is found in ordinary bronchopneumonia, which in fact confines itself almost entirely to the bases of the lungs. Rales may first be elicited in the nipple region as pointed out by Holt. The X-ray will show disseminated areas of infiltration throughout the lungs together with enlargement of the bronchial glands. And lastly, the sputum, which can usually be obtained by swabbing the throat with a bit of gauze after the child has been made to cough will show tubercle bacilli.

THE DICTUM OF DR. LEON VANNIER.—L'Homœopathie n'est pas un procede therapeutique, elle est la therapeutique qui, precedent de l'experimentation sur l'homme sain, repose sur la loi de similitude et emploie la dose infinitesimale. Elle est la therapeutique de l'avenir, la seule qui puisse repondre a l'evolution della science contemporaine.

SOME OF THE MORE COMMON DISEASES OF THE ORAL CAVITY.

BY

G. W. MACKENZIE, M. D.

(Read before the Eastern Dental Society, Philadelphia, March Meeting, 1914.)

As dentists, you probably see a greater number and variety of diseases of the oral cavity than we physicians. With your wider experience you no doubt can offer us many valuable hints in the recognition of these diseases. I am here, therefore, to exchange views and opinions with you on some of the well recognized pathologic lesions of the lips, tongue, tonsil, buccal cavity and pharynx.

One of the most important diseases we have to consider is syphilis in its various stages and manifestations.

The primary lesion or chancre may occur in any part of the mouth, but selects more frequently the lip, tongue and tonsils. The site of the chancre is determined by the point of entrance of the specific organism of syphilis (*Spirochaeta Pallida*) discovered by Schaudinn in 1905.

A chancre of the lips appears first as a flat, more or less rounded, erosion, about the size of a split pea or larger; somewhat elevated above the surface of the surrounding normal tissue. It is sharply defined, indurated and feels like parchment. When squeezed between the fingers there exudes a clear serum containing spirochæta. This original chancre increases in size, reaching sometimes that of a nickel (5 cent piece). It is rarely painful and is followed early by painless, hard swelling of the submaxillary lymph glands, which ordinarily do not abscess. A chancre may become quite indurated and thick; the central parts may ulcerate, due to mixed infection. In the case of a mixed infection the neighboring lymphatics are likely to suppurate.

A chancre usually occurs singly, but may be multiple.

The above description answers for chancre of the tongue where it occurs more frequently on the tip or side, with the exception that on the tongue a chancre rarely ulcerates.

In the case of the tonsil the process is less sharply defined than on the lip or tongue and there is more likely to occur inflammatory œdema in the surrounding structures and with it more pain.

Secondary syphilis of the skin and mouth are concomitant and more or less alike in character and intensity, with the exception that one is dry and the other moist.

Corresponding to the Roseola on the skin we find in the mouth multiple, small, somewhat rounded, slightly hyperemic spots with well defined edges.

Frequently we find a more marked picture where the lesions in the mouth stand out more distinctly, are slightly elevated and possibly eroded. Although there is slight induration there is no inflammatory areola. Ofttimes there is a confluence of these slightly elevated, eroded, gray or whitish spots into larger areas corresponding to the typical mucous patches. Occasionally mucous patches may become quite thick. They may even ulcerate because of mixed infection where the subject has been previously affected with foul and unsanitary mouth conditions (infected teeth, pyorrhœa alveolaris, etc.). In passing permit me to refer to the so-called alopecia of the tongue, a condition sometimes met with as a sequence of secondary syphilis where the papilla of the tongue atrophy and leave red, slightly glossy areas, a condition which we must not confuse with the so-called mapped or geographic tongue.

Secondary syphilitic manifestations in the mouth rarely involve the neighboring lymphatics as in the case of the primary lesions, except in those rare cases of ulcerative mucous patches.

Tertiary syphilis manifests itself in the mouth as a papular or nodular infiltration of granulomatous tissue known as a gumma. These involve primarily the submucous tissue. Under appropriate treatment they may undergo a favorable termination by a process of organization when sclerosis follows. Under less appropriate treatment they break down and ulcerate. The whole process, from the beginning infiltration to the stage of ulceration, is rather rapid; often requiring but a few weeks. The floor of the ulcer is uneven and covered with necrotic shreds of tissue and sero-pus, rarely bloody and offensive as in the case of carcinomatous ulceration.

The sites of predilection are the tongue, palate and the region of the palato-pharyngeous muscle. In the case of the palate there frequently results a perforation. The bony structure being less resistant to syphilis than to tuberculosis. In the case of syphilis the bone is primarily involved and the infiltration extends from the bone to the surface.

After the healing of an ulcerated gumma there is characteris-

tic scarring with resulting stellate, white, cicatricial bands causing marked deformities and impairment of function of the parts involved in the process. A rare form of tertiary syphilitic lesion of the lips causes a great thickening, a pseudo-elephantiasis.

Mercurial stomatitis clinically resembles secondary syphilis of the mouth and it sometimes is difficult to differentiate the two processes, especially in those cases of syphilis where the patients have been over treated with mercury. In mercurial stomatitis there is, as in the case of secondary syphilis, multiple papules and ulcerations. With mercury, however, there is more diffuse congestion and swelling of the mucous membrane, more pain, more offensive breath than in syphilis; in addition there is marked salivation, the typical blue discoloration of the gums and swollen tongue, showing the imprint of the teeth.

Injuries to the mucous membranes of the lips and mouth from biting accidentally or otherwise made by those who have the habit of chewing their lips during moments of mental concentration may give rise to eroded and ulcerated areas resembling the mucous patch.

The acute specific fevers associated with skin eruptions may occasion a corresponding rash in the mouth. In the case of measles, the well known Koplik's spots; in scarlet fever, the typical pharyngitis and tonsil involvement, etc. The transient character of these eruptions together with the fever and accompanying symptoms are sufficient to prevent us from making a misdiagnosis of syphilis.

Pemphigus of the mouth and pharynx appears late in malignant cases. We have the original rather large bullae followed by rupture and ulceration. Pemphigus, unlike secondary syphilis, is very painful and has a distinct inflammatory areola.

Herpes zoster may manifest itself in the mouth and resemble somewhat pemphigus, however it is less severe, is associated with neuralgic pains and follows the course of a nerve trunk and is likely to be manifested on the skin in the near neighborhood and in unilateral affection, besides there occurs some swelling of the neighboring lymph glands.

Herpes simplex resembles the zoster but is decidedly less pronounced and generally associated with a cluster about the lips; they are less painful, show very slight if any areola.

Thrush or baby's sore mouth is likely to occur in those infants where the nurse has been careless as to the hygiene of

the rubber nipples used in the nursing bottle. There is considerable congestion of the mouth and fauces and irregular sized and shaped areas covered with a membranous exudate.

Aphthous ulcers in the mouth can hardly be confused with syphilis in view of the fact that the aphthous ulcers are usually smaller, shallow erosions, quite painful, surrounded by a bright red zone. They occur in fewer numbers and clear up quicker than the mucous patches of syphilis.

Vincent's angina, but for the fact that it runs a rather chronic course, is more likely to be confused with diphtheria than syphilis. It affects, more frequently, the tonsils and the region of the tonsils. A grayish white exudate is formed on the tonsils, which may ulcerate. This pseudo-membrane can be peeled off leaving a raw bleeding surface, after which another membrane forms. General symptoms are few.

Diphtheria manifests itself in the fauces as a gray or dirty yellow pseudo-membrane; occasionally with slightly curled edges. The membrane is tenacious and adheres very closely and upon separating it, the mucous membrane tends to bleed. The disease tends to extend superficially. It runs a rather acute course with fever, is painful, is associated with enlargement of the neighboring lymphatics. The specific organism is the Klebs-Loeffler bacillus, which can be detected in a smear made from the exudate. The disease yields promptly to the anti-toxins serum.

Acute lacunar tonsillitis is usually bilateral; however, one tonsil may be affected a day or two before its fellow. The lacunæ or crypts are primarily affected. They contain a mucopurulent discharge which exudes from their openings and spreads more or less on the surface of the tonsils about their ostia resembling somewhat a false membrane. The tonsil itself is enlarged, red and sensitive to the pressure coincident to the swallowing act. The general systemic disturbances from the toxemia are pronounced. The patient suffers with fever, headache, deep muscular aching and some prostration. In severe cases the submaxillary lymph glands become enlarged and painful. The intensity of the symptoms depends upon the nature and virulency of the infecting micro-organisms. A careful inspection of the tonsils permits us to distinguish these deposits on the tonsils from the pseudo-membrane found in diphtheria and Vincent's angina and the mucous patches of syphilis.

Peritonsillar abscess or quincy is so distinctly different from all the other conditions mentioned that confusion in diagnosis could hardly result, except in the case where a beginning abscess may be associated with lacunar tonsillitis or a case of syphilis occurring in a patient subject to peritonsillar abscess; when it may possibly be confused with a gumma. However, a gumma is never so painful as a peritonsillar abscess.

Keratosis or pharyngo-mycosis of the pharynx is a condition where we find firmly adherent, horny, white excrescences of keratinized epithelium. The specific fungus is the *laptothrix buccalis*. The tonsils are usually involved, although we may find the patches elsewhere in the pharynx. They cause slight irritation of the throat.

Leukoplakia oris is a chronic superficial inflammation of the mucous membrane; it occurs more often in syphilitic than non-syphilitic patients. At one time it was thought to be found only in syphilitics. It is favored by unhygienic mouth conditions. They are found in all parts of the mouth and pharynx, but more especially the tongue. They first appear as filmy, white spots, which coalesce and become thicker and more opaque. They cause less subjective disturbances than their appearances would seem to indicate. Leukoplakia are resistant to treatment; predisposes to carcinoma. Mercurial treatment as for syphilis tends to aggravate the condition.

Lingua nigra or hairy tongue is likewise due to a superficial inflammation of the tongue. The condition is one of hypertrophy of the filiform papilla of the tongue and not to an actual growth of hairs, as much as they resemble real hair. The color varies from black or dark brown to an auburn color. Aside from a sense of dryness the patient complains of little or no discomfort. Although the condition is supposed to be rather resistant to treatment I have seen at least two cases clear up spontaneously.

Lingua geographica or mapped tongue seems to be a non-inflammatory condition of unknown etiology. It appears as ringed or crescent shaped areas on the tongue of a gray color. Photographing the areas on several occasions, a few days apart, will show that the geography changes rather rapidly, unlike the so-called annular syphilides which they otherwise resemble. The mapped tongue appears in early life and is persistent, perhaps showing a trifle less apparent at one time than another.

The condition bears no relationship to syphilis and causes no discomfort.

Macroglossia or chronic parenchymatous glossitis is a rare condition, due to repeated attacks of acute glossitis. The tongue becomes enlarged and may interfere with eating, drinking and articulation. There is associated salivation.

Carcinoma occurs usually in middle life or after. It may appear in any part of the mouth, but selects more frequently the lip, tongue and tonsils. On the lip it selects the angles of the mouth rather than the more central portions, where we are likely to find a chancre which it may otherwise resemble. It begins as a small node which soon ulcerates and tends to bleed. On the tongue the cancer more frequently starts from an old scar on the dorsum or along the side of the tongue corresponding to the location of a sharp fragment of a tooth. Cancer tends to ulcerate early, bleeds more readily and produces early metastasis in the neighboring lymphatics. The odor from the ulceration, as noted on the patient's breath is very offensive and peculiarly cadaveric. Unlike gumma, pain is an early symptom of carcinoma, at first needle like, later more lancinating in character.

Carcinoma has a hard indurated and elevated margin and somewhat peripheralward of this may occasionally be seen, on careful inspection small, light colored bodies corresponding to the characteristic epithelial pearls. The progress of the tumor is slower than that of gumma. Eventually the patient shows the characteristic cachexia of cancer.

Tuberculosis occurs less frequently in the mouth and pharynx than in the larynx. It is usually secondary to a primary lesion elsewhere, more often in the lungs, even though the original lesion may have healed or otherwise escaped clinical diagnosis because of its small size. A site of predilection of tuberculosis is the hard and soft palate and fauces. It may develop as multiple, discrete, small infiltrations which break down into small ulcers (miliary tubercles), or the tubercles may begin as small infiltrations gradually increasing until they assume considerable proportions. They do not always necrose (caseate) early, but when they do undergo coagulation necrosis they leave dirty looking ulcers with irregular outline, uneven floor and overhanging edges. Prior to their breaking down the tuberculous infiltration is rather pale, afterward, with the coincident secondary infection the parts may become quite

congested. Tuberculous infiltration may spread superficially or into the deeper structures involving eventually the bone while in gummatous infiltration the process is rather the opposite, the extension is from the deeper structures toward the surface. Tuberculous ulcerations are more painful than gummatous. This is especially noticeable in cases of laryngeal tuberculosis. Tuberculosis of the larynx, pharynx or mouth presents a rather grave prognosis as compared with the pulmonary type.

Cancer, tertiary syphilis and tuberculosis form a trio which are not always so easy to differentiate as one might think. To further add to our difficulties we may have two of these processes existing in one individual at the same time. For instance, tertiary syphilis and cancer, the former may be the predisposing factor in the production of the latter. So too may syphilis and tuberculosis be associated, since syphilis predisposes to tuberculosis. Less frequently are cancer and tuberculosis associated and when they are it occurs as a mere coincidence.

To offset these handicaps in the differential diagnosis we have recourse to the use of the microscope in studying excised portions of the growth, the advantages of bacteriologic study and the serum reactions, including the Wassermann test, the Noguchi luetin test for syphilis and the several tuberculin reaction tests, i. e., the Calmette in the conjunctiva, the von Pirquet cutaneous reaction on the skin, etc.

SOME NEUROLOGICAL OBSERVATIONS WITH DIGITALIS.

BY

WILLIAM F. BAKER, M. D., PHILADELPHIA

CONCERNING the use of digitalis in its effect upon the heart and circulation much has been written and much more needs to be written. The current belief that digitalis is of value for "all irregularities of the pulse" is fast becoming modified by our investigations along the use of the remedy, and these investigations tend to prove that digitalis is a remedy that must be carefully watched and more so than we have been accustomed to doing. At the American Pharmaceutical Associa-

tion in conference in Richmond, Virginia, in 1910, much stress was laid upon this thought. In fact, the following conclusions were reached:

1. Absorption from the alimentary canal and susceptibility are variable.
2. The activity of digitalis cannot be fixed by oral administration.
3. Cumulative action occurs to such a degree that no conclusions can be drawn regarding the activity of effects on animals where the drug had been previously used, unless the time was of long duration.
4. The reactionary states are the ones to be taken into account.

Concerning the reactionary states, it is fair to assume that in these states we will find the most useful sphere for further investigation. One of the most potent observations along the line is its relation to blood pressure, namely, that the rise in pressure is not always proportioned to the dose of the drug; i. e., a small dose will cause a certain rise, and a double dose will not necessarily cause twice this rise; while a maximum dose will cause toxic symptoms so that pressure will eventually follow more rapidly than if a small dose were used.

No one will deny that, physiologically speaking, the strong doses are certain in their toxic actions, certain in their aftermath of symptoms, but we must remember that smaller doses act differently and are the ones which invite study along homœopathic lines.

No matter what doubt there may be as to the cumulative action, chemists have not as yet offered us any positive conclusions. It is certain that the drug kills either by death in systole or overwork on the part of the organs, causing exhaustion in death by its own diastole. In either case the result is due primarily to stimulation of the heart, varying it from its physiological activity and its therapeutic activity. Neurologically speaking, the result of digitalis on the brain and spinal cord varies the blood supply to those organs, varies their nutritional and functional activities, and one must therefore look for a varied ascertained symptomatology.

The circulatory changes in the brain are primarily those of anæmia and congestion. The resulting states from these conditions are delirium tremens, delirium, coma, and all states of the nervous system associated with the circulation. The sec-

ondary effect of these disturbances is one of complete exhaustion, and the first symptoms of digitalis in the nervous sphere are symptoms of exhaustion, associated with mental depression often bordering on melancholia. Anxiety and a disassociation of sensibility, also a disassociation of environment. By that, I mean the patient imagines himself to be out of harmonious relationship with his previous psychic state. These symptoms must not be confounded with those calling for the use of cinchona, where we have a soft open pulse, clean tongue, and a moist skin—but a cool skin. In cases requiring digitalis as a remedy, we have vertigo, disturbances of the color sense with dilated pupils and insensible pupillary reflex, and always associated with a pale, sickly expression of the face. There is present a marked irritability of temper, associated with a confusion of ideas. There is a development of a definite idea of a dual personality.

It has been my experience, in the notation of several cases of aggravation of mental symptoms by the excessive and uncontrolled use of digitalis in the form of the tincture, that the above noted symptoms are genuine and pronounced. Also there may be a dullness in the sensorium which is possibly dependent on the idea of color sense fancies. They have increased the idea of anxiety and lead the patient on to ideas of protection which were quite unnatural in the normal state, and with the cessation of the dosage there is immediate danger of collapsic symptoms, yet the gradual elimination of the drug resulted in a gradual return of the patient to a normal mental state. Not alone do we have visual hallucinations, but also auditory ones in which there seems to be present a commanding of the views which controls and dominates the patient to the extent of his physical strength. This also results in extreme prostration. The inability of the patient to clearly interpret these mental changes results in anxiety, or results in excessive timidity which borders on cowardice. That these symptoms of the excessive use of digitalis are genuine is shown by the two cases which will be cited, and that these symptoms are liable to occur in any case without caution is the warning that will be thrown out to the general practitioner. In one of the cases cited, the persistent use of the drug resulted in a decided weakening of intellect. Digitalis as a neurotic depressant has recently fallen into the class in which it rightfully belongs, and observers are fast coming to the conclusion that the

secondary effects are the ones to be sought for and watched rather than the primary if the action of the drug is to be followed by a prolonged improvement of the condition. It must be remembered that the retro-active characteristics of digitalis cannot be overlooked and the fall is usually as great as the primary rise and, as one looks into the experience of modern observers, the fall is usually greater than the primary rise. The primary action is the prolongation of the diastole, the re-action, however, is on the systole producing systolic irritation, which more than over balances the diastolic contraction. The final action of the heart is due to spasm in systole.

One must recognize that digitalis, when first administered, is slow getting into action, but by repeated dosage the effect on the heart is appreciable. It is a well known medical fact that, when the slowness of the pulse takes place and the heart is materially affected by the drug, that action continues over a prolonged period of time. Beside acting on the heart, digitalis is primarily a vasomotor influencer and its vasomotor effect is the one primarily of importance in this paper. The effects of vasomotor disturbances are seen in the so-called secondary effects of the drug and are evidenced in the brain and spinal cord to an extent that has for some reason escaped notice of clinicians and bears a relationship decidedly upon our administration of this drug as a remedy in any case.

With the vasomotor influence, there is an increase in the arterial tension. This is manifested by dimness of vision and clouding of the intellect, vertigo and, in the cases about to be reported in the development of an obsession of fear and anxiety, and the further development of what are known in the mental category as reactionary states, such as, for instance, the protection of oneself from the supposed anxiety or the object of fear.

There are two essential actions of digitalis to which attention is to be directed:

1. It produces a condition of excitement in the controlling centres of the heart.
2. It has a specific action on the heart muscle, whose contractions are strengthened in the first stage, becoming irregular in the second and in the third a peculiar irritability is produced.

The primary action is to cause an increased power in the heart and eventually ending in a rigid tetanic permanent con-

traction which means death or recovery with secondary effects which are the reverse of the primary, the heart rarely completing its normal contraction because of the feeble condition of the muscular fibres.

There can be no question realizing that such effects are accepted by most all schools and practitioners of medicine, that digitalis is homœopathic to both primary and secondary effects.

Burt, writing on this subject says: "Unless we appreciate the secondary effects of the drug, a large percentage of our cases cured with appreciable doses of the drug appears to be antipathic." The more one looks into the pathogenesis of digitalis, the homœopathic use is aptly described by Burt, viz: "When the muscle of the heart is for any reason unequal to the task set it, the systole becomes rapid and imperfect and, by this irregular action the ventricles neither completely filling nor emptying themselves, increase the embarrassment. Digitalis, by lengthening the diastolic pauses and increasing the force of the systolic contractions, causes the ventricles to fill themselves in the one and to completely empty themselves in the other. By subduing irregular action through the inhibitory nerves—by energizing the muscular power of the heart vessels—the remedy is of value. Increasing arterial tension all over the body causes the disappearance or lessening of symptoms due to a low pressure in the arteries."

Summing up briefly, then, digitalis is homœopathic to hypertrophy with dilatation, mitral insufficiency, aortic stenosis, irritability with hypertrophy, and irregularities with cardiac debility. One of the most important uses of the drug in potency has been in cases of neurasthenia and debilitating neuroses, where there is a general atrophy of the circulatory tone. In my experience, digitalis if given in the third or the sixth dilution far exceeds many nerve tonics, and especially if that lack of tone in the nervous system is evidenced by a peculiar symptom of anxiety and aggravation at night. These two symptoms associated with a lack of tone of the nervous system have led me to use digitalis many times with surprising results, after such nerve tonics as strychnine, arsenic, iodide, and picrates have failed.

A valuable suggestion here is the incompatibility of digitalis and cinchona, and I trust that this will be looked into with greater care, and the so-called tonics containing this drug be

set aside during the administration of digitalis. As to the specific restorative medicines associated and agreeing with digitalis are ferrum, strychnia, and arsenic.

(At the first reading of this paper, it was suggested that iodine had been left out. This was purposely done, as the single remedies had given the better results and, when cases are individualized, results have been uniformly good.)

Another suggestive thought concerning the action is that, in animals the respiration ceases before the heart. It would be unfair to assume that the respiratory centres are primarily affected, but would it not be a reasonable proposition to assume that, because of the varied blood supply to the brain, the functions of the medulla are performed in an irregular manner? I fancy they resemble the missing in our automatic cylinders when, for some reason, carburetter trouble is urgent. I use this simile because it clearly illustrates what I have in mind concerning the respiratory and other medullary functions.

Another question in mind is what permanent harm may be done to the intracerebral contents because of the varied blood supply so opposite to the natural? That symptoms resultant from the hyperaemias and the anaemias consequent upon the indiscriminate use of the drug occur beyond doubt, and that they can be avoided by the careful study of the patient and the careful administration of the drug, also, must be testified to by the majority of clinicians, and the conclusion resulting therefrom.

The changes within the arteries of the cerebral hemispheres and the brain are evidently the same as those in other parts of the body; i. e., with hypertrophy, there comes an overgrowth of the intima of the vessels and a consequent narrowing of the lumen. Then the question arises: how much of this hypertrophy is permanent and what is the resulting symptomatology from the permanency of that narrowing of the lumen.

Again, the more important question of the cerebral circulation is, that the important vessels are nonanastomotic; i. e., the vessels are terminal ones and here we are subject to endarteritis. With this in mind, damage to these arteries may be, and is, common; the result being a permanent lessening of the brain faculties. This suggests care in the use of the drug with the aged and infirm.

Sir William Jenner, writing in an article on digitalis with reference to fatty degeneration of the heart—and the same

holds true of the nervous system—once said “Fatty degeneration of the heart was a conservative pathological process, for associated with this state, there was a general arterial degeneration. Under these conditions, it is a wise provision on the part of nature that the heart is weak, for, did it possess its wonted force, it might readily cause rupture of cerebral blood vessels—an accident that occurs with too great frequency even under existing conditions—with disastrous results. To administer cardiac stimulants without judgment must, therefore, be in the highest degree irrational.”

I think this statement should set at rest all doubts as to the advisability of the indiscriminate use of digitalis up to the point of its physiological limit, and should set the pace for digitalis as a drug to be administered by the physician, and directly controlled by his using a minimum dose that will do the most good and with the patient at rest.

Very few clinicians take into consideration the fatty processes in degeneration which nature has conservatively made incident to heart changes, and may be part and parcel of the same process that involves the heart. Especially so is this found in the case of the cerebral vessels. Evidence of arterial degeneration in the brain has been noted in several cases during the administration of digitalis and, in one case, pronounced cerebral symptoms noted following the long continued use of the drug. Case 1. M. A., age 12. Was perfectly well until several weeks ago. At that time was taken with severe pains in the limbs, high fever, vomiting, and was confined to bed with what was diagnosed as rheumatic fever. When first seen the patient was in a collapsed state, giving evidence of a mild delirium. A history taken from the patient's parents shows that, while taking a dark medicine, the child is made worse up to a point of loss of control of the nervous system, resulting in violent fits of passion, followed by an overwhelming fear and obsession that she was “not at home.” This was followed by a depression of the entire system, bordering on melancholia. Following these attacks, the patient became so completely exhausted as to cause a complete collapse. The particularly interesting feature of the case was that, with increasing doses, the condition returned, and when a complaint was made to the attending physician that this was the case and the condition of the child reported to a colleague, the matter was taken up and it was found, unfortunately, that the dosage was far in excess

of what was intended. The dark medicine referred to was the tincture of digitalis U. S. P.; dose 3 to 5 M. every hour.

The condition of the child did not improve and, with a diagnosis of maniacal neuroses, the case was referred to me. The peculiar symptom being an anxiety as to being at home, associated with violent attempts to force away the restraint that was keeping her. This required great effort and, through effort, the patient was completely prostrated.

Case No. 2. W. M., age 63. Diagnosis.—Mitral disease. Patient had been accustomed to the taking of digitalis tincture for the relief of attacks of tachycardia. This was a steady habit with him for, as he expressed it, he had found this remedy tonic and stimulative in his declining years. His average dose was ten drops three times daily. On the day of his first visit to the office, he had been taking—as he later explained—an overdose and, when he was examined, his dual personality was evidenced in the form of a weak, cowardly, defenceless, clinging individual, in place of the man of affairs that he had always been in his prime and in his natural position. The patient complained that, when he had been taking the drug continuously, the feeling of security and strength, which was manifested with the first doses of the drug, were fast giving way to an element of fear. In other words he had lost the comfort for additional work that the drug had been accustomed to afford him. His family complained, also, that while taking the drug, his disposition is changed entirely and that, instead of being the considerate father and husband, the opposite was true and, when for any reason, he had taken an overdose, his condition was pitiable and, as his wife had expressed it, he was “going out of his mind.” Fortunately, his condition called for another remedy and, with rest of a few weeks in bed, he was made to realize that digitalis was not the proper remedy and, with a complete rest, his condition returned to normal and he was able for several years to do good business.

These two cases show some of the results of the indiscriminate use of digitalis, without fatal effect, except in the first case, where there is a permanently damaged heart and one which will always be damaged. But the attractive standpoint to the neurologist is the peculiarity of the nervous phenomena in each case.

When the dosage of the drug was low, the physical effect was as pronounced and the recovery as quick, so that in each

case the patient was enabled to attend to business; i. e., there was increased muscular force accompanied by a loss of control verging on mental collapse, due to the obsession of fear. This is the peculiar mental symptom that I hope to call your attention to by the citation of these cases.

THE IMPORTANCE OF THE MATERNITY PATIENT ENGAGING HER MEDICAL ATTENDANT EARLY.

BY

WARREN C. MERCER, M. D.

(Read before the Society of Gynecology and Obstetrics, Philadelphia, Pa.)

As medical science advances the general public and State Boards are demanding more thorough and better equipped physicians to practice medicine. This is also the case in the practice of obstetrics; not only does the obstetrician take every precaution, but it is being demanded of the general practitioner; and by so doing much suffering is prevented, and many lives saved. This point in view, it requires that the patient seek her accoucher early in her pregnancy. This varies in different countries as well as in the different localities in the same country and earlier in the cities. The physician has been selected, then he should see the patient and confirm her suspicions of pregnancy and satisfy himself that such is the existing condition, if too early to do this, then he should see her a month later, by which time he would be sure of his diagnosis. I grant it is hard to make a diagnosis in the early months. Cessation of menses is usually due to pregnancy, and finding a uterus equal in size to the number of months missed, along with the other signs you may find, will convince you that the patient is pregnant. In a few months you will be shown up as to your correct diagnosis. This being the case, in the early months you should be on the lookout for an ectopic in your examination. If it should prove to be an ectopic, it is possible for you to avoid a very serious accident, as an illustration:

A patient was sent to me one morning to find out if she was pregnant, and from the symptoms, I suspected ectopic. I tried to persuade her to go to the hospital but to no avail; she went shopping instead, and I learned afterwards that she had a severe attack of pain and collapsed on the elevated train near

40th street, about 5 P. M., that day. She was taken to the Presbyterian Hospital and operated immediately; diagnosis, ruptured ectopic.

This is the exception, but still we must be on the lookout. You are to supervise her diet according to the requirements of the case, also her exercise, especially of a young primipara, the older ones usually take precautions. Where the patient is required to do her own work they are advised to go on as usual. The wealthier ones should be prescribed mild exercise, but short of the point of fatigue. They should have a certain amount of rest each day, and during this time secure some sleep. The latter class require mental occupation as well, for some become melancholy. The patient should be seen regularly at stated intervals during the whole course of the pregnancy. In the early months when the bimanual examination is made we should be on the lookout for other conditions than ectopic, for instance, cystic ovaries, fibroid tumors of uterus and broad ligament cysts to ascertain if they will interfere with labor. If such should prove the case, they can be operated at once, such an operation frequently causes an abortion, but at times the operation can be put off till term and the tumor and child removed at the same time. Nausea and vomiting is frequently a very annoying symptom to some patients, this, many times can be relieved by proper treatment, occasionally it is excessive and will not respond to any treatment, then it is necessary to interrupt pregnancy. The pregnant woman seems prone to constipation, some of them going many days without an evacuation. This should not be allowed, as they are already suffering from a certain amount of toxemia which this increases. The bowels should be moved regularly every day, preferably by enema. The urine should be examined every three weeks till the seventh month, and every two weeks thereafter so as to avoid any surprise from this quarter, and know that the kidney is doing its duty. The most important things to ascertain are quantity, specific gravity and test for albumin and sugar microscope for casts. You frequently get a test of albumin in the urine due to a vaginal discharge. I once heard an obstetrician say the urine from a female was useless unless a catheterized specimen. If any abnormal condition is found then you treat the patient medicinally and regulate the diet. At the same time keeping in touch with the blood pressure, which will indicate to you the approach of convulsions and the

result of the treatment of the case. Bleeding occurring in the latter months would lead you to suspect placenta prævia and you should be on the alert for the same. Some authorities advise caesarean section for this condition in the last month of pregnancy and are doing it. The physician has already made an internal pelvic examination for the diagnosis of pregnancy and any abnormal condition of uterus and adenexia, should have explored the bony pelvis for abnormal growths and make a mental comparison of the size, shape and roominess of the pelvis and its outlet. External pelvimetry will help here decidedly. All primiparae should be measured to learn if there is any disproportion in the measurements, and all multipara that gave a history of difficult labor. By so doing we may ascertain what will be the ultimate treatment for this or that case. The extreme cases can be easily decided, but the border ones will keep you guessing for they are very hard to decide. These cases in the last two months of pregnancy should be examined from week to week so that you can make a comparison or estimate by external palpation how long you can let them go, and the head still go through the pelvis; of course to accomplish this you must bring on premature labor. From personal experience premature labor is not so easily brought on, or it does not accomplish the end, and you must deliver the patient with forceps; with the risk of losing the baby. Caesarean section is a much easier method and, if, by election, just as safe with less danger to the child. This comparing of the foetal head with the inlet of the maternal pelvis is a difficult proposition, and can only be estimated or judged by one who is at it every day, even then it is very difficult. Many babies are lost because the physician is persuaded to interfere before he has the indications. Time will work wonders along with a little intelligent knowledge in your handling of the case. Some authorities advise giving a list of symptoms to the patient and if they occur, the medical attendant should be notified. Here is a list:

Scanty urine.

Persistent headache.

Disturbance of vision.

Swelling of the feet and eyelids.

Hemorrhage or any other symptoms out of the ordinary.

Many of these subjects could be elaborated extensively, but it has been my purpose to draw your attention to the most important ones.

APOPLEXY.

BY

CHARLES D. FOX, M. D., PHILADELPHIA.

SPONTANEOUS cerebral hemorrhage is almost always the result of weakening of the cerebral arterial walls and, consequently, is apt to occur as a complication in the course of any diseases which cause, or which are associated with, endarteritis. The predisposing causes, therefore, include such conditions as syphilis, alcoholism, plumbism, gout, nephritis, advanced age and acute infectious diseases. It is well known, also, that some families exhibit a hereditary tendency to apoplexy. The typical apoplectic is a heavily built male of about forty years in whom we find arterio sclerosis, cardiac hypertrophy and chronic nephritis.

The exciting causes include intense emotions and any great muscular efforts by reason of the increase in intravascular tension which they induce. Even coughing, vomiting, straining at stool and coitus have brought about cerebral haemorrhage. The time of life when cerebral haemorrhage is most frequent is during early infancy and during the fourth and fifth decades.

Internal cerebral haemorrhage occurs most frequently in the basal ganglia, and generally originates from rupture of the lenticulostriate branches of the middle cerebral artery. As the internal capsule, which contains the motor fibres governing the opposite half of the body, commonly is involved, either directly by extension of the haemorrhage or indirectly through compression, naturally the patient presents paralysis of the contralateral half of the body. Infrequently the haemorrhage may tear its way into the ventricles, and even more rarely it may break through to the cortex.

The onset of the ordinary kind of cerebral haemorrhage is almost always sudden, and is usually associated with immediate loss of consciousness. During the first few hours, or days, after the onset the patient ordinarily is in a state of coma with slow, stertorous respiration. Cheyne-Stokes type of respiration develops in some cases, and these, it is hardly necessary to state, usually terminate fatally. The face is mottled or cyanotic. The pupils are usually unequal, and sluggish, or inactive, on exposure to light. When the coma is profound the

corneal reflex is absent. Urinary retention is to be expected and, naturally, should be relieved by regular catheterization.

During the first hours, or days, it may be very difficult to discover which side has been paralyzed, because the extremities of both sides are equally flaccid and all of the tendon reflexes are lost. By very careful examination of the face, however, we can usually determine that one side is more relaxed than the other by means of the flattening out of wrinkles and, during respiration, by the movements of the lips and the puffing out of the cheek of the paralyzed side. Soon after the onset the surface temperature of the paralyzed side rises from $\frac{1}{2}$ to 2 degrees higher than that of the other side, and this phenomenon is associated with unilateral increase in perspiration.

After a number of hours, or even days, the coma very gradually passes away and the hemiplegia becomes obvious to all. As a rule, the degree of paralysis is much greater in the upper extremity and is most intense in the muscles that move the fingers and hand. The involvement of the face, in contradistinction to that of the peripheral, or Bell's facial paralysis, is characterized by only slight impairment of the functions of the muscles in the frontal and ocular regions. Another distinguishing feature is that the facial paralysis becomes less apparent during expression of the emotions as in laughing or crying. The unilateral paralysis of the tongue causes thickness of speech and, when the tongue is protruded, marked deviation towards the paralyzed side.

When the hemorrhage occurs in the left side of the brain the hemiplegia commonly is associated with aphasia, and this condition is persistent in about 75 per cent. of the cases. Homonymous hemianopsia is a frequent complication; the blind fields being on the side opposite to the haemorrhage. If it does not disappear in a few weeks the hemianopsia is usually permanent. Hemianaesthesia, on the same side as the hemiplegia, occurs when the sensory pathway in the posterior part of the internal capsule is involved.

After several weeks voluntary motion in the paralyzed side begins to return in the lower extremities and gradually progresses, to be followed by similar partial return of function in the face and upper extremity. Several months after the attack, or even sooner, the patient may be able to stand and to walk. The return of the tendon reflexes of the paralyzed side does not occur until several weeks after the onset. Then they

not only return, but also become exaggerated, and are associated with rigidity, ankle clonus and the Babinski sign. Contractures appear in the course of the next month or so and produce the characteristic deformities.

The prognosis of a first attack of cerebral haemorrhage varies greatly. However, about one third of these patients die, and the mortality increases greatly if a second stroke occurs. Symptoms which are indicative of a fatal termination are: Occurrence of convulsions, as these probably indicate that the haemorrhage has extended into the ventricles; Cheyne-Stokes respiration; persistence of coma after the third day; recurrence of the coma; sudden elevation of the temperature; pneumonia; and the development of severe bed-sores. According to Dana, the duration of life after cerebral haemorrhage averages about five years.

Considerable improvement of the hemiplegia is to be expected during the first few months. After this period but slight progress is made, and this ceases after the first year or eighteen months. In the majority of cases the fingers and hand never recover their functions to a degree that they are useful members.

From the point of view, both of therapeutics and of prognosis a correct diagnosis is essential. The conditions which are most apt to be mistaken for cerebral haemorrhage are thrombosis and embolism. Cerebral thrombosis is most apt to attack leucic young adults and the aged with advanced arterio sclerosis. The onset is commonly preceded for hours, days, or even weeks, by premonitory disturbances such as headaches, vertigo, and tingling, numbness or weakness in some part of the side which is to be paralyzed. In the majority of cases consciousness is preserved, and when coma has developed, it is not profound. Quite a number of patients are encountered who have neither been compelled to go to bed nor to call in a physician during attacks. The patient with cerebral embolism is usually young, free from nephritis and endarteritis, but possessing a heart murmur, or a history of recent phlebitis, endocarditis, or an acute infectious disease. Unlike thrombosis there are no premonitory symptoms. Consciousness may be preserved, and when coma does appear, it is not profound, nor is it attended with total loss of all the tendon and skin reflexes. Symptoms of compression of the brain naturally are absent both in embolism and in thrombosis.

Unfortunately, it is not uncommon to meet with cases of apoplexy whose symptoms and physical signs are so involved that a differential diagnosis is difficult, if not impossible. On the other hand, autopsies often demonstrate the fallacy of what were considered to be positive diagnoses.

When the patient with cerebral haemorrhage is seen immediately after the stroke the indications are to reduce arterial tension. This may be done by the administration of tincture of *veratrum viride*, gtt. 5 at once and then gtt. 2 or 3 every half hour until the desired effects are produced, or a hypodermic of 1-200 of a grain of atropine may be given. When the diagnosis is doubtful it is best to refrain from active medicinal treatment as vaso-dilators are distinctly contraindicated in thrombosis and in embolism. The patient should be kept perfectly quiet with an ice cap applied to the raised head.

The possibility of distention of the bladder with overflow is to be constantly borne in mind. The fact that urine is being passed involuntarily by no means is proof that the bladder is not distended: the size of the bladder must be determined at frequent intervals by percussion. If consciousness has returned and the patient is able to swallow, liquid diet may be commenced at the end of twelve hours. After the acute stage has passed the position of the patient should be changed frequently and strict attention should be paid to the skin in order to prevent, if possible, the formation of bed-sores.

The homœopathic remedies of value in the treatment of cerebral haemorrhage are numerous, and vary according to the indications in individual cases. Of particular value, however, are the following remedies: During the onset—*aconite*, *belladonna*, *cactus*, *lachesis*, *gelsemium*, *veratrum viride*, *glonoinum* and *opium*. For the hemiplegic state: *phosphorus*, *argenticum nitricum*, *baryta carb.*, *arsenicum album* and *lachesis*.

A day or so after the return of consciousness gentle massage and passive movements of the paralyzed side should be instituted in order to limit the development of contractures. As voluntary muscular control returns the patient should be encouraged to develop the affected muscles by cautious exercises. For the same purpose interrupted faradism is valuable.

Because of the great danger of a second stroke those who have had apoplexy must be careful of their mode of living. They must abstain from all alcoholic beverages and use coffee and tobacco moderately, or not at all.

The diet should be simple and overloading of the stomach avoided. Any intense emotional excitement and any sudden or prolonged exertion may be terminated by recurrence of a haemorrhage.

REPORT OF A CURIOUS CASE OF SARCOMA OF THE THYROID.*

BY

DOUGLAS MACFARLAN, M. D., PHILADELPHIA.

FRANCIS F., aged 72, a rugged old Civil War veteran, came to me in December, 1912, complaining of a growth in the neck. His story ran that he had noticed four years previous a small lump in the thyroid region, which growth had gradually grown to its present size, that of a large grape fruit. At no time did it inconvenience him, and even now only worried him because he thought it about to break down and ulcerate.

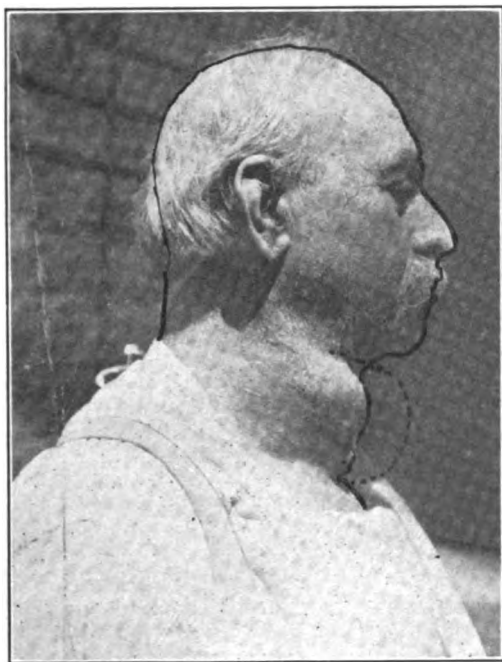
Examination showed a firm, dense tumor in the region of the thyroid; its size, that of a large grape fruit, protruding to a vertical level with the chin, and giving the neck a circumference of 24 inches. Its shape was round and uniformly bilateral; that is, it occupied equally the two sides of the thyroid. It was bound down below to the inner ends of the clavicles and to the top of the manubrium, expanding laterally by dense infiltration. Above it was attached to the thyroid cartilage and was movable with it,—the mass likewise moved with swallowing. The skin by this time was thin and somewhat tense, being also bound down to the parts beneath. There was a zone of dark injection about the middle of the growth, capped in the mid-line by a soft fluctuating spot, which looked like and later proved to be, beginning cystic degeneration.

There was no glandular enlargements in the neck and no symptoms of hypo- or hyper-thyroidism. Dyspnea and dysphagia were absent. Laryngeal examination showed nothing except a chronic organized hypertrophy of the mucous membrane about the arytenoids and laryngo-pharynx. The movements of the cords were normal, and a good view well down the trachea showed no evidence of constriction. An X-ray picture showed merely a dense infiltrating mass in the thyroid region.

In such manner, then, did the case present itself, to all ap-

* Case presented at Clinico-Pathological Society.

pearances it was a sarcoma and all those who saw it immediately suggested this diagnosis. The course of the case is interesting. Cystic degeneration developed, that is, large cysts of the size of a hickory nut appeared upon the surface and ruptured exuding a bloody serum. With their walls collapsed they would remain as shallow pits in the dense mass beneath. This course of the formation and rupture of cysts has gone on uninterruptedly, and with it the mass is gradually reducing



in size. The circumference of the neck is now 16 inches, as compared with the original 24 inches. There is still no evidence of metastasis, no glandular swelling, and no symptoms of hypo- or hyper-thyroidism. The only subjective symptoms are the annoyance of constant sero-sanguinous discharge and the dread of hæmorrhage. There has developed in the course of the case a moderate anæmia, with hæmoglobin at 65 per cent. and the usual blood picture.

As to diagnosis the case presents certain pros and cons in respect to sarcoma. Its superficial appearance, its density and infiltration all bespeak sarcoma, but its prolonged, benign course, the absence of cachexia, absence of metastasis conflict with this diagnosis. Sarcomata are, however, the most dependable class of malignant growths, for, though usually taking a violent course ending in death from hæmorrhage, they may at times be slow in their development or may even retrograde, as apparently in this case. The "benign" course of "malignant" tumors has been most often noted in the thyroid, and much speculation has arisen as to whether or not the thyroid secretion has any inhibitory powers on neoplasms. The point has not been established.

As to the development of hypo-thyroidism in these conditions it rarely appears, for though the gland may be apparently obliterated the cell-function is supposedly taken over by the neoplastic cells. This hypothesis is particularly probable when carcinomata of the gland is considered; what the condition can be in the case of a large sarcoma can be merely conjectural. Von Bergmann reports a case in a man past forty in whom, after removal of the thyroid for carcinoma, symptoms of myxedema promptly appeared, continuing until a recurrence when they gradually subsided as the recurrence became more marked (quoted by Carmichael, *Jour. A. M. A.*, Jan. 3, 1914, p. 33).

In the case of this old veteran there should be considered a differential diagnosis between sarcoma and fibrous hyperplasia of the thyroid. The "fibrous goitre" is usually *accompanied by* cysts, and does not present itself in the distinct picture of dense hardness *followed by* cystic degeneration as in this case.

It is regrettable that I have not been able to get a microscopical section of the growth and until I do there will be a remote element of doubt about the diagnosis. The case, then, is merely presented as it appears, a sarcoma of the thyroid of five years' duration, now undergoing degeneration and retrogression. Such indefinite and inexplicable conditions, though unsatisfactory on account of their variability, are good food for thought and speculation in the light of a few facts definitely established.

CAUSES OF SUDDEN DEATHS.

BY

J. A. BURNETT, M. D., HARTSHORNE, OKLA.

THERE is but little said about sudden deaths in either medical books or journals. As there are so many sudden deaths, I believe this subject should receive more attention.

In the *Medical Summary*, March, 1911, Dr. D. L. Field has an article on "Sudden Deaths." He reports four sudden deaths. One died in bed in the morning. One patient died in the Doctor's office while waiting for an examination. Another was found dead in the bed and still another found dead in a bath room.

I located here in Hartshorne, November 7, 1912, and since coming here there have been three sudden deaths in the city. A man walked into a physician's office here in the city for treatment, and died there very suddenly. Recently I was called to church to see a woman. She had risen up to testify and was talking when she suddenly fell back on the floor. I was called and got there in a very few minutes and found her dead, with a broken neck. Of course the fall broke her neck, but I do not know whether some other cause killed her before she fell or not. It would have required a post-mortem examination to fully determine the real cause of the death. Only a few weeks ago a woman here in this city was found dead at her home.

When I was practicing at Pauline, Ark., in 1903, I was called to see a woman about 45 who was found dead at her home. She was all right as far as known a few minutes before she was found dead, as her sister had seen her only a few minutes before. In 1905 I was practicing medicine at Cecil, Ark., I waited on a woman, Mrs. P. A., in confinement, November 15, 1905. This was her first child, a girl, which appeared normal in every way. The babe lived several months apparently as healthy as the ordinary, and then was found dead in bed.

We occasionally see something of spontaneous cures, spontaneous combustion, etc. We have sudden attacks of diseases. In the July, 1906, *Medical Summary*, Dr. B. R. Browning reports a case of sudden deafness. Fainting paralysis, etc., comes suddenly. A patient may die suddenly after operation or otherwise from thrombus. In my opinion the public should

be better informed by physicians regarding sudden deaths. In cases where medicines have just been administered or operations performed or other treatment given, and a patient dies suddenly many, through ignorance on this topic, may think the physician, either through ignorance or intent, had killed the patient. The same holds good in other sudden attacks of fainting, paralysis, etc. A dose of medicine or some other treatment given and the patient be suddenly attacked in some way would cause some ignorant person or persons not informed on this subject to think the doctor may have caused it.

The statement that ignorance is the cause of all crime, disease and poverty comes nearer the truth than many suppose.

SOME THERAPEUTIC RESULTS OBTAINED FROM URETERAL CATHETERIZATION.

BY

WILLIAM C. HUNSICKER, M. D., PHILADELPHIA.

(Read before the Meeting of the Society of Surgery, Gynaecology and Obstetrics.)

CYSTOSCOPY as we all know, was at first (and is still) in the main, a diagnostic procedure, but with the perfection of the instruments, improvement in technique, and an increasing number of expert cystoscopists, its usefulness has extended to the therapeutic field.

Without discussing all the phases in treatment of which the cystoscope is capable, this paper will consider only that which its title indicates.

Let it be understood that while the writer is reasonably enthusiastic concerning the results obtained by catheterization of the ureter in selected cases, he does not consider it a panacea for all obstructions, retentions or infections of the upper urinary tract, nor will it always obviate the necessity for operative procedure; yet, with increasing experience, that which at first was looked upon as unusual or accidental, has been repeated with such frequency as to be rather expected.

The most brilliant results have been obtained in those cases of acute retention (the so-called acute hydro-ureters or hydro-nephroses) before marked infection or change of structure has taken place. Besides these, the writer is satisfied, as will be

shown by cases reported later, that severe infections have not only been palliated, but in some instances completely cured by drainage and lavage. Also, in several cases of ureteral calculi, dilation and straightening of the ureters have corrected conditions, which enabled them to pass out through the channel.

The therapeutic value of the catheter was first brought to the writer's attention in March, 1908. Mr. C. was referred for cystoscopy and catheterization to locate the exact position of a ureteral calculus shown by the X-ray to be in the lower segment of the left ureter. The patient had had weekly attacks of "kidney colic," severe and classic in type, extending over a period of one year. Catheterization of the ureter at this time was impossible, owing to the marked upward and outward displacement of its meatus. The attending surgeon unsuccessfully attempted to remove the calculus by an extra-peritoneal operation, and again, later, by an intra-peritoneal one. These failures were due to the large amount of fat in the abdominal and pelvic cavities in which the ureter was imbedded.

After these operative failures, the patient was again referred to the writer, who, after several attempts, finally succeeded in passing a catheter some two inches up the left ureter, which was sharply bent outward at its lower extremity. This successful catheterization occurred on January 17th, 1909, and was followed by a severe attack of ureteral pain with sudden relief. On the 19th of January, the patient passed a calculus per urethra the size of a pea.

In the interval between the operations and up to this time, attacks of ureteral pain had continued as before. On February 24th, 1909, the patient again had a mild attack. His ureter was again catheterized, and he passed—two days subsequently—another calculus somewhat larger than the first. Since that time the patient has had no return of his "kidney colic," and on April 13th, 1913, requested cystoscopy and X-ray examination to determine whether he was free from calculi. Both examinations were negative.

This case is one in which the calculi were lodged behind a distortion and bend in the ureter, and the passage of the catheter straightened and dilated the canal enabling them to pass. This is one of a series of four cases in which a similar result was obtained, the last one being only a few months ago.

Apparently it is not always necessary to pass a catheter into

the ureter to relieve distressing symptoms, as is shown by the report of the following case:

In December, 1909, Mrs. F. was referred to the writer to locate what was supposed to be a ureteral stone passing down or lodged in the ureter. The history was that of pain extending from the left kidney downward and inward along the course of the ureter, beginning the week previous to examination and increasing in severity until during the latter portion of the week it was constant and extremely intense, no relief being obtained by the full dose of morphine which had been given. There was no X-ray examination in this case.

The patient was in such pain and in such an extremely nervous condition, that ether was administered and the cystoscope passed. The examination revealed a white, ulcerative plaque just within the bladder rim on the posterior wall about the size of a five cent piece with an intense inflammatory streak extending along the left side of the intra-ureteral ligament, and including the left ureteral opening in the extremely swollen and oedematous mucosa. So great was this oedema that it was impossible to locate the opening. The right opening was normal in appearance, but the spurt was increased.

In attempting to locate the opening, capillary points of bleeding were caused—five or six in number. The attempts were discontinued for fear of causing too much injury to the inflamed mucosa.

The patient was returned to bed, and after coming out of the anæsthetic, was entirely free from pain—the first relief she had for one week.

Three days later she was again cystoscoped under ether, because of her extreme nervousness. The plaque was still present, but the left ureteral opening was apparently normal and there was no inflammation extending along the ureteral ligament. The ureter was catheterized, no obstruction found, and clear urine was withdrawn which, by analysis, was found normal.

On January 4th, five days after admission to the hospital, she left feeling perfectly well, since which time, according to the report of her physician, she has had no return of the symptoms, although previous and subsequent to this attack of kidney and ureteral pain, she has had slight discomfort during urination due to the ulceration at the bladder outlet.

This case was one in which we had acute retention of the

urine in the ureter and kidney pelvis gradually distending them and producing the classic symptoms of a kidney crisis due to an inflammatory occlusion of the ureteral orifice, and was relieved by the multiple punctures caused at attempts at catheterization.

This type of case is the one in which the most brilliant results have been obtained. In several patients the inflammatory obstruction was high up in the ureter, the catheter draining the retained urine and relieving the distress.

As to cases of retention plus infection, the results have not been quite so brilliant, most of them being simply palliative; but nevertheless, in several instances, the writer feels satisfied that a permanent cure has been accomplished by drainage plus lavage—one in particular, which will be now noted, standing out prominently.

On May 4th, 1912, Mr. S. was admitted to a private room of the hospital and referred for cystoscopic examination, but was in such a serious condition that the surgeon and attending physician determined to postpone the examination, fearing the patient would die on the table.

He had been hurried from Atlantic City in a special train, having had a rapidly increasing septic condition referable to the kidneys of three weeks standing. The patient, at the time of admission, was running an extremely septic temperature, was irrational, and, as stated before, in a serious condition. The urine, macroscopically, was loaded with pus.

Cystoscopy was determined on the next day in spite of his serious condition. A clear medium was readily obtained, the bladder mucosa found normal except a small area surrounding the left ureteral opening; the spurt from left side was very slow and cloudy; right, rapid and clear. Both ureters were catheterized, some difficulty being encountered on left side. The left catheter drained rapidly a creamy pus—right a clear urine.

The specimens from both kidneys were sent to the pathologist for examination. The left kidney pelvis was washed with sterile water. The patient was returned to his room, and marked improvement followed the examination.

Two days subsequently the report of the urine came back, showing coli bacillus infection of the left side and normal urine on the right. In the meantime, the patient had continued to improve. An autogenous vaccine was made and injected in the usual manner.

On May 8th the patient had improved so markedly that cystoscopy with drainage and lavage was again advised and consented to. At this time the left ureter drained a smoky urine, the pus, of course, being much reduced in quantity. The right still normal. The phthaline test in both appearing in seven and one-half minutes.

The patient left the hospital in a short time with renewed health and has since married, and when last seen (about six months ago) was stouter and better in general health than he had ever been in his life.

Another remarkable result obtained from ureteral catheterization was in a patient—Miss O., 60 years of age. She was admitted to the hospital in January, 1911, with the most marked septic temperature that it has been the writer's privilege to see, varying from $96\frac{1}{2}$ to 105 several times within twenty-four hours, with chills lasting as long as an hour. The patient had an extremely tender and palpable left kidney, and cystoscopy was requested previous to operation.

The left ureter was catheterized and an obstruction met at eight inches, which we were unable to pass. Two days afterwards a second attempt was made, this time successful, and a heavy, cloudy urine drained rapidly from the catheter, one and a half ounces draining within a very short time. The specimen was sent to the pathologist for examination, and the kidney was washed with sterile water.

Immediately following this examination the temperature came to normal, and stayed practically normal for a week, when she again commenced to show a septic condition, shooting her temperature up to $102\frac{1}{2}$. Again cystoscoped and the left ureter catheterized. At this time the right was also catheterized for diagnosis, and the condition there found to be normal. After this examination there was not such a marked relief of symptoms, but in conjunction with the Murphy drip, which was continued for some time, the patient was finally discharged from the hospital apparently in normal health.

In October, 1913, thirty-two months after, she had a recurrence of the old condition, not so marked as at first. Cystoscopy was performed and an obstruction was again found at eight inches which could not be passed. The patient was returned to her room, and, in spite of the fact that the obstruction could not be passed, all the symptoms subsided. On November 20th she left the hospital, and after reaching her home

a calculus the size of a pea passed from her urethra. This patient had not been X-rayed at any time as far as the writer's records show.

This was a case of obstruction due to a ureteral calculus which had been overlooked at the first examination, and relief had been obtained by displacement of the calculus and subsequent drainage with lavage. After the last catheterization the calculus had been displaced sufficiently to enable it to pass from the ureter, relieving the symptoms. Her physician assures me that she is now in first-class health.

These cases could be continued through a long series, but it would only be a repetition of the results as outlined in the few cited. The writer cannot, however, let the opportunity pass of describing a recent case which was under his observation in the obstetrical department of Hahnemann.

A young woman, about six months pregnant, developed double pyelitis, probably from pressure, with retention and infection. Her condition was so grave that an abortion was considered. Cystoscopy was requested to determine the severity of the retention and infection. Following a double catheterization of the ureters with lavage the symptoms were much relieved. A few days subsequently cystoscopy, catheterization and lavage were repeated with a complete clearing up of the symptoms. The patient was delivered at full term of a child whose only deformity was a congenital dislocation of one of the limbs.

Also following child-birth, a brilliant result was obtained in the wife of one of our own physicians who had septic pyelitis, which gave her physician and her husband a great deal of anxiety. Catheterization of the ureters with lavage in this case completely cleared up the grave symptoms.

The probable reason why so little literature on the therapeutics of the ureteral catheter can be obtained is because the cystoscope has only come recently into general use, until within the last few years, being in the hands of a few experts, whose investigations have been mainly along diagnostic lines. Now, every community has its own number of well-trained cystoscopists, and with the broadening field, more patients are brought under cystoscopic observation, and as the years pass, the writer feels assured that many cases which have heretofore been considered only as operative can avoid this procedure by the proper application of the ureteral catheter.

A COMMUNICATION.

EDITOR OF THE HAHNEMANNIAN:

I thank you for your editorial in the March issue upon the "Licensing of the Drugless Healer."

May I have some additional space in our journal to express the hope that individuals and local societies of our school will respond to appeals to assist the Bureau of Medical Education and Licensure in making the enforcement of the law more thorough?

The Bureau has felt that it would be both unwise and unfair to drastically enforce the law until some fair and adequate provision has been made for the legal practice of drugless therapy of those who seemed best qualified to perform such offices.

We have attempted to provide for this in a manner previously outlined. We have set certain standards for those who may subsequently enter into the practice of drugless therapy that we regard as amply protecting the public. For those who do not remember my previous communication, I will again state that the standard for those not at present in practice in this State will be identical in preliminary requirements as that of those contemplating a course for the M. D. degree: their first two years will embrace a course of study as comprehensive as that received by the Doctor of Medicine: less only the parts involved in materia medica, pharmacology and surgery.

The Bureau found that it must exercise a certain relative leniency towards the practitioners of drugless therapy now in the field, just as has been exercised towards medical practitioners, when former medical acts were passed.

The most important fact is that the enforcement of the law, as the Bureau has attempted to interpret it, will absolutely prevent the accrument of untrained men to the list of cults and specialists, who hold themselves out as capable of treating the sick.

I trust that the profession will not feel that it is the intention of the Bureau to bestow a license upon every applicant, of every cult who may send in his check and formal application papers; this is very remote from the facts.

The Bureau proposes to carefully review the personal and professional credentials of every applicant; it proposes in a very large number of cases to have the applicant submit to a

written examination, in which evidences must be shown of a certain degree of training, professional and otherwise.

The first examination for license to practice "Drugless Therapy" will probably be held June next; after that time, those not then qualified will automatically become illegal practitioners and will be dealt with accordingly.

D. P. MADDUX.

**RECOGNITION OF THE AMERICAN INSTITUTE OF HOMOEOPATHY BY
THE AMERICAN COLLEGE OF SURGEONS.**

Chicago, April 18, 1914.

Dr. DeWitt G. Wilcox,
419 Boylston St.,
Boston, Mass.

My Dear Doctor :—

I take pleasure in informing you that the Board of Regents of the American College of Surgeons at its last meeting in New York unanimously recommended that the American Institute of Homœopathy be placed on the same basis as the American Medical Association, Clinical Congress of Surgeons of North America, and other associate societies. By referring to our directory or the circular I sent you recently, you can ascertain definitely what that relation will be. I am quite sure that with the unanimous recommendation of the Board of Regents there will be no difficulty in making the change in the constitution which will be necessary to bring this matter about.

I am writing this same information to Dr. James C. Wood.
With kind regards, I am

Yours very truly,
(Signed) FRANKLIN H. MARTIN,
General Secretary.

EDITORIAL

THE ATLANTIC MEETING OF THE AMERICAN INSTITUTE OF HOMŒOPATHY.

THE time for the annual meeting of the American Institute of Homœopathy is fast approaching and practitioners who expect to attend the meeting should make their plans and reservations at the hotels as soon as possible.

The place of meeting this year will be Atlantic City, and the date, from June 28th to July 3d, inclusive.

The President, Dr. DeWitt G. Wilcox, has done excellent work in preparing the plans for a successful meeting. He has appointed good live men on the various committees and has covered a large proportion of the meetings in his efforts to come in contact with homœopathic practitioners and to make a personal appeal to them through their societies to help make the Atlantic City meeting a success. As a result of his tour, Dr. Wilcox states that this meeting promises to eclipse all others, both in the number of attendants and in the general interest displayed.

"There is," he adds, "an unmistakable evidence of a widespread enthusiasm all over the country concerning Homœopathy. It begins to take on the complexion of an old-time revival: the lukewarms, the weak-kneed, the chronic knocker and the doubting Thomases, seem to have received a hypodermic injection of co-operative serum and are falling over themselves to help boost the Institute."

Certainly, if our esteemed President can inspire the members of the Institute with even a small part of his zeal and enthusiasm for the cause, the coming meeting will be a memorable one in the annals of the Institute.

The transportation committee has arranged for a special train from Chicago—stop-offs at Washington and Philadelphia. We believe the policy of the committee in arranging for the meetings to be held in one hotel, the Chalfonte, will prove to be a wise one. On former occasions meetings have been held on

the piers. The noise and the traffic of the boardwalk has seriously interfered with the sessions.

The Chalfonte is one of the best known of the many famous hotels for which Atlantic City is famous and the prices, which range from three-fifty to six dollars per day, on the American plan, are extremely reasonable.

The scientific portion of the programme promises to be of more than usual interest. Nearly every bureau has been offered more papers than chairmen could find time for and on this account there is an opportunity to select those which would seem to be of most interest and value to the profession.

The social attractions of the meeting will be numerous, including a frolic night on the closing evening of the session, July 3d.

The homœopathic physicians of Pennsylvania and of the surrounding States are especially urged to be present at this meeting, as our brethren of the other sections of the country largely look to us to make the meeting a success. G. H. W.

A WARNING.

FIVE hundred practitioners of "Drugless Therapy" have applied to The Bureau of Medical Education and Licensure of this State for license to treat the sick. The conditions under which these licenses will be granted or refused have been explained in detail in a previous issue of the *HAHNEMANNIAN*.

The Bureau has, and will make a careful scrutiny of all credentials. The Bureau has, and will give most careful attention to every protest entered by a responsible person, in which any specific information is contained. The Bureau cannot entertain objections based alone upon the grounds of general inefficiency. Each of our local societies, every member of our profession in this State must recognize that they have an important and real duty to perform, that they cannot escape, evade, or transfer. The Bureau desires only information of an exact and precise nature: hear-say evidence, the mere existence of an objection on the part of the individual cannot be made use of in any way. I think that our local societies and the members of the profession at large should share the burden of this work with the Bureau.

This is a very acute problem that confronts us. Are the ethical, "real physicians" of this State sufficiently alert and in-

terested to do their parts towards preventing dangerously incompetent men receiving a license to treat the sick? Are there enough real live doctors, who realize that they owe something to society and their profession as well as their purses, to help make this effective? I often despair at the supine indifference with which the average member of our profession regards his duty and obligations towards that profession. While it may be the special duty of some few members of the profession to give unusual attention to a certain matter that has been delegated to them; yet that does not absolve the local societies or the individual member from the responsibilities owed to the public and the profession.

One might generalize and moralize upon this topic to an indefinite extent. How ready we are to place the entire burden of responsibility upon the Government, the Church, the College, the Hospital, the Society, the Committee: without recognizing that the ultimate enforcement of the thing sought for depends upon the individual effort of some one. I deplore the fact that more than a half of our profession assumes the attitude that when they refer any subject to the special consideration of any Society or Committee, it absolves every individual not appointed to that special task from either interest or activity.

WAKE UP! is that right? Should not every real doctor concern himself in reference to everything that touches his profession? It is impossible for the Bureau to collect the necessary information unless it has the very active co-operation of the entire profession. The licenses granted by the Bureau will be for life, unless revoked for cause. I have not the slightest doubt that the Bureau, in spite of the greatest efforts and caution, will grant licenses to many ignorant, incompetent, dangerous people. We ask the aid of the profession to make this number as small as possible. The only consolations we can have are: that there seemed no other way of shutting the door, than by granting concessions of a similar type granted to medical practitioners when the standards of medical education were raised; that by these concessions legal complications and delays are avoided, and best of all we will be assured that after June, 1914, the flood gates admitting untrained men and women calling themselves "doctors" are closed, and all that are subsequently licensed to treat the sick must and will show evidence of adequate preparation.

Every man and woman that reads this, or should read this, has an individual responsibility. Don't kick after it is all over and blame some one else. Assume your own responsibility now. Send to any member of the Bureau specific information why any person in your community who practices any of the methods of "Drugless Therapy" should not receive a license, or else hereafter and forever hold your peace.

This is meant for the one that reads it, not some other fellow. Now is your time to act, later the kick will do no good.

D. P. MADDUX, M. D.

GASTRIC ULCER AND HYPERCHLORHYDRIA, DIET IN.—The intervals between feedings should be as long as possible, food being given preferably not more than two to four times a day. The diet should be as little appetizing, tempting and palatable as is practicable. Soups, broths, and other preparations of meat extractives should be forbidden. Meat is to be excluded and protein food reduced. Coffee and tea should be avoided. Water should not be drunk in large amounts, not over 250 c.c., or 8 ounces, at one time. Alkaline drinks, however, may be more freely taken. Carbohydrate food is permissible. Oil should be taken before meals, or the diet should contain a large amount of fatty material.

In using vegetable oils, such as olive oil, almond oil, cottonseed oil, the best results seem to be obtainable by giving it in quantities of an ounce or more a half-hour before meals; with it is given a simple carbohydrate-fat diet. When pure oil is distasteful, it may be given made up in mayonnaise dressing, to be generously used.

The use of cream as the sole or chief ingredient of the diet has also found favor. One quart (4 glasses) of cream a day yields about 1800 calories, which alone is sufficient for many small-sized persons leading the quiet lives of invalids. It contains only about 25 Gm. of protein; but 20 Gm. more of protein would be furnished by the addition of 600 c.c. of milk or 220 Gm. (6 slices) of bread, or 230 Gm. (5 tablespoonfuls) of oatmeal gruel (cooked with milk), or 3 eggs. The richness of the cream in fat effects a marked inhibition of gastric secretion. It may cause acid gastric indigestion from the splitting of its fat by the lipolytic action of the gastric juice; but in the author's experience this effect usually disappears after a few days. If not tolerated in full strength, the cream may be given diluted with an equal or great amount of milk. The use of corresponding amounts of ice-cream is a useful variant method. Among the 26 cases of gastric ulcer thus dieted by the author, some marked cases, including one with profuse repeated hemorrhages, progressed to good recovery, though two or more months of treatment, with many weeks in bed, were sometimes required to effect this result. The method is adapted to ambulant treatment, and seems rational for simple hyperchlorhydria as well as ulcer. It was also found of prophylactic service, dyspeptic symptoms suggestive of recurrence of ulceration usually promptly subsiding after a few days' resort to cream diet.—J. B. Nichols, *Journal of the American Medical Association*.

GLEANINGS

PICRIC ACID IN THE TREATMENT OF VARIOUS SKIN LESIONS.—Eczema. Better results were obtained by the author with picric acid in the acute than the chronic eczemas. Striking improvement was seen in the facial cases with profuse exudation, excoriation, and crusting. In the milder cases an aqueous solution was painted on several times daily and allowed to dry, while in the more severe cases wet dressings of picric acid were applied, held in place by a facial mask. Lessening of the itching and pain was almost immediate. Reduction in the serous exudation and softening of the crusts were equally prompt. Improvement in the induration was rapid, as was the subsequent epithelialization. Such prompt relief was not obtained by any other means.

In the subacute and chronic types of the disease, cure of the lesions was hastened materially by initiating the treatment with two or three days' application of picric acid solution, and then following with the usual ointments of zinc, tar, salicylic acid, calomel, mercury, etc.

Burns.—Results obtained in 2 severe cases showed the efficacy of picric acid in paving the way for the rebuilding of injured tissue. One case was that of a child burned to the third degree from the waist line to the toes of the left lower extremity, with only small islands of first- and second-degree burns occurring in the popliteal space, groins, and calf. Although the skin and subcutaneous tissue sloughed away from the entire left leg, exposing the bone in places around the ankle and foot, complete epithelialization was obtained without skin grafting, and normal function of the limb restored.

Intertrigo.—Picric acid solution was painted on the surfaces involved and they were kept from coming into contact with thin layers of absorbent cotton. In the more severely infected cases wet dressings were used. Cures were effected in about half the time taken in similar cases treated with ichthyol solutions.

Erysipelas.—Results in this condition were not uniformly successful, but in certain ways they were more satisfactory than those of any other method. The discomfort and pain were relieved more quickly and the edema disappeared rapidly. In several cases desquamation in cast-like masses followed the use of picric acid, leaving healthy skin beneath. A reduction in temperature in these patients was the rule occurring with or without marked improvement in the local condition.

Herpes Labialis.—A more rapid drying of the lesion and fewer extensions of the trouble were obtained with picric acid than with any other method used.

Ringworm.—Ringworm of the scalp did not respond more rapidly than to other methods of treatment; body ringworm was more easily controlled

by painting on picric acid solution than with the usual antiseptic ointments.

Psoriasis.—Immediate and constant relief from itching; otherwise no particular response.

Vaccination.—A few cases treated with applications of picric acid from the start ran a normal course, did not become infected, and showed very little local reaction. Several badly infected vaccinations treated with the acid made very rapid recoveries.—H. H. Wilcox, *Archives of Pediatrics*, November, 1913.

SYPHILIS, THE NOGUCHI LUTIN REACTION IN.—It is in the earlier stages of syphilis that the highest percentage of positive results is obtained with the Wassermann test, while in the later stages the lipotropic substances upon which a positive reaction depends are frequently not present in the serum, owing to fluctuations in the activity of the spirochetæ induced by treatment, or to the production of antibodies which neutralize these lipotropic substances. On the other hand, these fluctuations in the activity of the spirochetæ favor the development of the state of allergy or anaphylaxis, which must be induced before the skin will react to the injection of luetin. Thus, a positive Wassermann test indicates the presence of metabolic substances in the serum due to present or recent activity of numbers of spirochetæ on the tissues, while a positive luetin reaction is indicative of a state of hypersensitiveness to the specific proteins of the spirochetæ, induced by a period of cessation of the introduction of these proteins prior to the injection of the luetin.

The cases which reacted most intensely to the luetin in the author's series were, as a rule, those in which the Wassermann test was negative and *vice versa*. The luetin test is valuable as a diagnostic measure in the tertiary and latent stages of syphilis, but its greatest value, according to the author's experience, appears to be in the prognosis. Among 70 cases of undoubted syphilis, practically all of which had been treated, in all but 4 either clinical evidence, a positive Wassermann test, or a positive luetin reaction showed that the syphilitic infection had not been entirely suppressed. It seemed reasonable to assume that these 4 cases had been definitely cured. A provocative injection of salvarsan, followed by the application of both Wassermann and luetin tests, is suggested as a rational means of determining whether treatment has been sufficiently intensive to effect a cure.—G. B. Foster, *American Journal of the Medical Sciences*, November, 1913.

ROENTGEN THERAPY OF TUBERCULOUS LYMPHATIC GLANDS.—Philipowicz, *Wein. klin. Woch.*, believes that the Roentgen treatment of tuberculosis glands rarely fails if a correct technic be employed. Of 26 cases treated in this manner, 22 were later examined and three reported by letter, and in all of these the results were satisfactory, the lymphomata having completely disappeared or having been greatly reduced in size. Fistulæ rapidly closed, scrofulodermata healed, and in some instances there was a gain in weight. This was accomplished in spite of the fact that only four of the patients submitted to the treatment for a sufficient length of time. Both the hyperplastic indurated glands and those in which softening had

already occurred responded equally well to the rays. Ordinarily after three to five applications a reduction in the size of the lymphomata and a closure of fistulæ was observed. To obtain a complete cure, however, an average of fifteen sittings is required, which corresponds to four or five months' treatment. This method is not adapted for patients under ten years of age, owing to the possibility of disturbances of growth, and in the presence of marked anemia or phthisis small doses should be cautiously employed. The advantages of Roentgen therapy are the rapid and certain recedence of glandular swellings, the fine scars following the closure of fistulæ, the favorable influence upon the general condition, and the avoidance of any subjective disturbances.—*Charlotte Medical Journal*.

THE CLINICAL TREATMENT OF TRIFACIAL NEURALGIA.—In simple cases of trifacial neuralgia a careful study will clearly indicate the teeth or tooth, which is the cause of the neuralgia. The pulps of the teeth involved should be extirpated by pressure, using cocain anesthesia. After thorough extirpation by mechanical means, using suitable broaches, asepsis being maintained throughout, the apical portion of the root-canal should be filled with gold and the remaining portion should be filled with zinc oxychlorid. The zinc oxychlorid not only fills the remaining portion of the root-canal, but from its affinity for moisture, practically fills the dentinal tubules. This constitutes a perfect root filling.—Nelson T. Shields, D. D. S., *J. A. M. A.*, November 22, 1913.

This case will remain free from neuralgia until a lesion is formed with-in another teeth, when the same method of procedure should be employed. In severe cases of tic douloureux radical measures should be employed, and every pulp should be extirpated, the teeth filled as described and the mouth should be restored to normal health and usefulness. This will permanently cure.

Children suffering from the migraine type as described by Dana will generally be found to possess impacted teeth which should either be regulated to their normal positions or extracted.

By means of roentgenography infected impacted teeth can be revealed and then extracted. In most cases tic douloureux occurs after the patient has reached the age of forty-five, and has a poor circulation. The use of agents to induce a normal secretion of bile, which will favor restoration to health, is advisable.

Maxillary sinus complications are generally caused from the teeth. Occasionally the frontal sinus is connected with the maxillary sinus, as has been demonstrated by Dr. Cryer in a number of human skulls. The tooth or teeth causing the sinus development should be extracted and the sinus treated and cured through the tooth socket. Both sinus involvements on the same side can be cured from the socket of the tooth extracted. A sinus involvement should always be cured through a tooth socket.—*Med. Rev. of Reviews*.

PAY UP OR QUIT.—The following bit of advice to patients, according to the *Homoeopathic Recorder*, originally appeared as an advertisement in the *McLean, Texas, News*. While some doctors may object to the style of the writer we can all heartily agree with his sentiments:

"GET IT STRAIGHT."

"Please get it straight in your noodlums that some of you still owe me old bills, and that all humans need money, and that a doctor is just like a human, whether you think so or not. Some people seem to think he is one-half owl and the other half jackass; the owl proclivities making him prefer to be up at night instead of sleep, and the jack stock he is supposed to possess enabling him to endure all kinds of hardships and live on half feed and hot air promises.

"Some people prefer, it seems, to call a doctor at night, when, if they had to go after him, they would not walk a hundred yards for him. It's awfully easy to ooze up to the wall and call a doctor over the 'phone, then jump back in bed and wait for him to come through the darkness and cold and then expect him to come in looking pleasant. I want to tell you it's about as easy to practice medicine and always be pleasant as it is to sit long in a Texas red ant bed and look unconcerned.

About 95 per cent. of the night calls are useless, anyhow. If the patient is allowed to wait until morning, and a few home remedies are applied, nine out of ten will not need a physician by morning. People take too bloommin' much medicine anyhow. What some need is to be shot full of hot soap suds with an automatic squirt gun.

"Another thing—get it straight—I charge extra for night work, you bet your sox, and I charge extra for work in unusually bad weather in daytime. Night means, when the sun quits blinkin'.

"The cost of living and prices in every line of business have advanced during recent years anywhere from one-fourth to double or more, all except the country doctor's fees. Beginning the first of 1914 I shall charge for day calls in town \$2.50 per call, and \$1.00 extra, or \$3.50 for night calls. If I make two, three or a dozen calls on the same day, I make no reduction on charges. It's as much trouble to make one call as another, and if you don't want to pay for extra trips don't belly-ache for me to make them. Grant knows that if you leave it to me I will make as few as possible. Another thing, please get straight, I charge for prescribing over the 'phone. Calls to the country are \$1.00 per mile, one way, except at night, when an extra charge will be made, depending on the distance, weather, etc.

"Now, be sure you get this straight; cut it out and paste it in your hat; when you ask me to 'fix up' some medicine for yourself or folks, don't ask me what the medicine is worth and think, when you pay for the medicine that you've paid all. I charge for my services and charge from one dollar up. I am not SELLING medicine, I am PRESCRIBING it, and I'm not dishing it out for nothing. I had very good health before I came here. Moreover, cheap doctors are, as a rule, like all other cheap commodities, not worth a darn.

"I charge, and always have, \$15.00 for confinement cases in town and a short distance from town, and after that mileage is added. Extra charges are made for extra time of detention or when forceps are used. Naturally, a doctor expects cash for these cases, for you have nine months' warning in which to dig up the dough.

"Now listen, I don't care enough about the practice of medicine to prac-

tice just for a job, I want pay for it, and unless you pay, why, I simply don't want your business; and that's not all, you need not send for me if you think I am going to carry your account and trouble indefinitely.

"DR. BALLARD."

A SIMPLE METHOD OF PREPARING ALBUMIN MILK, *Arch. of Pediatrics*, March, 1914. Dr. D. B. Raymond, of Hooker, N. Y. City, submits the following formula:

Take one pint of fat free buttermilk and add to it one pint of warm water to which has been added 10 grains of powdered casein. This will make one quart of fat-free albumin milk.

If it is desired to have an albumin milk containing more fat, use artificial buttermilk made from whole milk instead of the fat-free buttermilk.

The casein used was that furnished by Eimer & Amend, New York. The formula of the albumin milk made from the fat-free buttermilk is: Protein, 2.8 per cent.; fat, .25 per cent.; carbohydrate, 2 per cent. The formula of the albumin milk made from the whole milk buttermilk is: Protein, 2.8 per cent.; fat, 1.75 per cent.; carbohydrate, 2 per cent. The percentages differing with the kind of milk used in making the buttermilk.

The therapeutic action of this albumin milk in correcting diarrhoeal stools has been found to be identical with the albumin milk made in the regular manner. The advantages of the use of casein flour in making albumin milk are: (1) It requires much less time in preparation. (2) Instructions for making are very simple. (3) It can be prepared in any home. (4) The casein flour can be dispensed from a clinic or dispensary. (5) It does not block the nipple. (6) It remains at an even suspension longer than the original albumin milk. (7) Its cost is less.

In a paper on a study of the results of tonsil operations on public school children in New York, reviewed in the *Archives of Pediatrics*, February, 1914, Dr. Gerhard H. Cocks concludes "that when children were referred to hospitals or clinics for operation, they should be sent to institutions which maintained nose and throat departments, in order to avoid attacking the tonsils when the anterior nares were at fault; that all adenoid and tonsil operations on children should be done under general anæsthesia, that the hospital should keep the patient for at least 24 hours after the operation." If these rules were followed out, there would be fewer secondary operations necessary, the children would not be shocked by the sight of blood, instruments, etc., there would be less danger of post-operative hemorrhage, pneumonia or other complications, and the result of the operation would be better in every way.—V. A. H. Cornell, M. D.

ARRHYTHMIA IN HEALTHY CHILDREN.—Ragnar Friberger (*Jahrb. f. Kinderh.*, 1912) gives his observations on irregularities of the heart in healthy children. He believes that a considerable amount of irregularity is consistent with perfect health in children. His observations included examinations of 321 children, aged five to fourteen years, of whom 64 were re-examined later. The children were measured and weighed, and their blood pressure was taken. Also tests were made for albumin, and heart and lungs were carefully examined. Not one of the 321 had an absolutely regular pulse. There were differences in the length of the beats and the

height of the curve. There was a moderately regular pulse in 37.4 per cent., a very irregular pulse in 12.2 per cent., and a moderately irregular pulse in 50.4 per cent. In most of the cases there was an alteration of long and short pulse. In others the pulse was suddenly retarded at regular intervals. In others after a series of short pulses a succession of pulse beats of double the length occurred. There is an evident relation of this arrhythmia with the variations of respiration seen in children. It may be laid down as a rule that children otherwise healthy and having normal respiration and digestion have no heart lesion even when irregularity is observed in the pulse. There is another category of nervous children in which psychical disturbances account for irregularity of the pulse. It occurs also in children convalescent from infectious diseases or other severe illnesses, due to true heart weakness. The author concludes that heart irregularities are physiologic in children from five to fourteen years of age. The cause of these irregularities is unknown.—*Archives of Pediatrics*, February, 1914.

PREPARATION OF COMMON INFANT FOODS.—Hunt, in the *Boston Medical and Surgical Journal* of November 20, 1913, says the object of his paper is to place before the home, simple, time- and labor-saving methods for preparing several of the common infant foods, as well as a few words on the relative merits of the ingredients to be used.

Barley-water.—Three-quarters of an ounce of barley flour is added to one quart of cold water and boiled for twenty minutes. Then add water to make up the original amount, and strain the contents through several thicknesses of gauze. The flour when placed in water becomes lumpy, and no amount of boiling will break up these masses. The difficulty may be overcome in two ways: First, a small amount of water may be added to the flour and thoroughly mixed, thus making a paste which will be nearly free from lumps. The second but better method is as follows: Partially submerge a fine wire strainer in the cold water to be used, pour the flour on the water in the strainer and stir gently with a spoon until the flour is in solution. The flour is quickly dissolved and the barley-water will be absolutely free from lumps.

Whey.—Heat fat-free milk (skimmed) to about 100 deg. F. or if you have no thermometer, to a point when a drop on the back of the hand feels neither hot nor cold. Add enough rennet or essence of pepsin to form a junket-like mass. Stir well to break the mass as finely as possible, and allow to stand for ten minutes. Pour off the top and strain through several thicknesses of gauze. If the whey is to be added to milk or cream, it must be heated to 157 deg. F., and immediately cooled to prevent the further action of the rennet. No "short cuts" are advisable in this method, but a word might be said to relieve the mental stress which arises when the color of the whey varies each time it is made. There are two reasons which might account for this change:

1. When made from milk which contains the minimum amount of fat and coagulated by practically pure rennet, the whey will be olive green in color. The greater the amount of fat present, the more yellow will be the whey. The percentage of fat in commercial skimmed milk or in whole milk skimmed at home is a variable quantity, hence the difference in the

color of the whey. During this process of making whey the fats present in the milk adhere and settle with the curd, but when pressure is brought to bear on the mass, the small globules of fat are forced out and remain suspended in the liquid.

2. The action of the proprietary rennets differs according to the percentage of rennin, pepsin, and alcohol which they contain. Nearly all contain from eighteen to twenty per cent. alcohol in the form of white wine. The curds formed by these rennets are soft, non-adherent, and many of the finer particles of casein remain in suspension and cannot be removed by repeated straining. Enough casein remains in the whey to give it a dirty yellow color. Allowing the whey to stand for two hours and then decanting it will tend to reduce the amount of casein. The powdered extract of P. D. & Co. or the liquid remet from Walker-Gordon & Co. are excellent for making whey.

Buttermilk.—A pure culture of lactic acid bacilli is added to skimmed milk in an earthenware dish, and allowed to stand at about 70 deg. F. for twenty-four hours, or until the casein is coagulated. Stir vigorously in a churn, or with a spoon or egg-beater, until the curd is very small, and then push the contents through a fine wire strainer with a spoon. If the buttermilk is too thick add a small amount of water. When the buttermilk is once made a small portion (about four ounces) may be used as the inoculating agent for the next supply to be made. In this way the original culture may be made to last from six to eight weeks. The quantity and action of the product made will vary but little. Add the four ounces of buttermilk to the fresh milk, incubate, and follow the above outline. Sometimes the milk will not coagulate although it may smell sour. Stirring gently with a spoon will often produce coagulation in a few minutes. The fat present will rise to the top, and when coagulated appears as a brownish-yellow scum which may be removed before the curd is broken up.

Eikweissmilch.—One quart of whole milk is heated to 190 deg. F. for three minutes and then cooled to body temperature. Add essence of pepsin enough to coagulate all of the casein. Break up the curd with a fork or spoon and allow to settle. Heating the milk to a temperature of 190 deg. F. changes the character of the calcium salts so that the curd formed by the addition of rennet will be soft flocculent, and non-adherent. The essence of pepsin is used instead of stronger rennets, so that the curd will remain soft. The precipitated casein is allowed to settle and the liquid part decanted. Straining the curd through linen or a wire strainer is impossible, because the curd is of such consistency that the meshes of the strainer are quickly obliterated so that no drainage takes place. After all of the liquid has been removed and only the curd remains, this precipitate may then be put into a wire strainer and the remaining portion of the whey allowed to drain off. This dry curd is then pushed through a fine wire strainer, by means of a spoon, into one pint of buttermilk and one pint of water. After the curd is strained into an empty dish, the particles quickly adhere and you have gained practically nothing by straining. This precipitate must be strained into liquid in order to make use of the colloidal action so that these particles will remain separated. The butter-

milk, water, and curd is then strained again, put into glass jars or bottles and kept on the ice.

Precipitated Casein.—The process of making precipitated casein is exactly the same as that of *eiwissmilch*, with the exception that fat-free milk is used instead of whole milk and no buttermilk added.

Milk-sugar.—A word might be said on lactose. Milk-sugar does not dissolve readily in cold water, therefore if the sugar be added to milk just before it is to be taken, the child does not get it at all if the bottle is not emptied, or gets it all at once in an undissolved condition with the last half-ounce or so of the feeding. To do away with this difficulty it is better to boil the sugar in a small amount of water, thus insuring a dissolved and sterile mixture. Milk-sugar becomes contaminated in the manufacture, and a bacteriological examination frequently shows the presence of many bacteria. *Aerogenes capsulatus*, the organism which causes fermented diarrhea, has often been found in the sugar, and several cases of intestinal infection have been traced to this source.

The above methods of preparing the several foods and the facts in regard to the important steps may be of benefit to those who are interested in the feeding of infants.—*Therapeutic Gazette*.

THE PREPARATION OF ALBUMIN MILK IN THE HOME.—In the *Journal of the American Medical Association* of November 15, 1913, Brady gives the following directions in detail:

1. Bring a quart of sweet whole milk to the boiling point; raw milk is not used as its curd is much tougher.
2. Cool to 100 deg. F.
3. Add one tablespoonful essence of pepsin and allow to curdle.
4. Pour off the whey and suspend curds in muslin bag for two hours.
5. Stand bag containing curds in 8 ounces of boiled cool water for one hour. This is very important and is the secret of the success which has been had in the preparation of this food.
6. Remove the bag from the water, allow as much water to drip as will, and place curds in sieve.
7. Add one pint of fat-free buttermilk to sieve containing the curds, and stir; it will be found that the curds will pass through in two to three minutes, which must be repeated three or four times.
8. Turn the bag inside out and return to the 8 ounces of water so as to obtain all the curd.
9. Pour in the sieve the 8 ounces of water which was used to soak the curds.
10. Add enough water so that the whole measures a quart.
11. Add the percentage of maltose-dextrin desired and put on ice.

Ten quarts of this food may be prepared after the curds have drained and soaked in less than ten minutes with the minimum separation of the fat.

UNILATERAL OPTIC ATROPHY AFTER COMPRESSION OF THE THORAX.—A miner was caught between a car and the side of the tunnel, receiving a diagonal compression of the thorax, but without the head or extremities being touched. Aside from the injuries to the thorax, the injured man, on

regaining consciousness, was blind, and presented a diffuse ecchymotic infiltration of head and neck. Five days later the examination of the eyes showed large ecchymosis of lids and conjunctiva in both eyes. Media and vision were normal in the left eye. The right pupil was moderately dilated, media clear, but the papilla was edematous, bloody suffusion of the lower part of the optic disc, and vision very poor. The left eye remained normal throughout, but optic atrophy followed the papillitis in the right eye, and vision was reduced to 2-10.

The occurrence of the ecchymosis in neck and face is explained by the sudden back-sweep of the blood in the vena cava superior; as this blood cannot find its way back into the vein of the upper extremities on account of the valves, it rushes into the free jugular. Whenever the pressure is higher, as in the eye, brain, and that part of the neck next to the collar, no ecchymosis occurs. In the sheath of the optic nerve, however, conditions are different, and Leraux thinks that a hemorrhage into the optic sheath will explain all the subsequent phenomena. The sudden loss of vision can be attributed with most likelihood, to a commotio retinae; some authors think an ordinary hematoma may be held responsible, others an edema of the choroid.—H. Leroux, Paris, *Arch. d'Ophthalmologie*.

WILLIAM SPENCER, M. D.

SUBCONJUNCTIVAL INJECTION OF NEOSALVARSAN.—Darier, Paris, found that in ten patients treated by the injection of a syringe of 1-100 under the conjunctiva there was apparent improvement in three cases only. Three cases of parenchymatous keratitis gave no result, one case of iritis with positive Wassermann was cured by a single injection, and one case of macular choroiditis with positive Wassermann was improved by a single injection. In one case of choroiretinitis with secondary cataract fourteen injections brought a considerable improvement in three months. Two cases of detached retina and one of irido-choroiditis were not influenced. Most of the patients refused a second injection on account of the severe pain.—*Arch. d'Ophthalmologie*.

WILLIAM SPENCER, M. D.

RECURRENCES IN PARENCHYMATOUS KERATITIS.—The author wishes to draw a sharp distinction between relapses and recurrences. The latter are those cases which present the classical symptoms months or years after the other attack has been cured. Von Hippel had fifteen cases out of eighty-seven, or seventeen in one hundred. The author had exactly the same experience. The recurrences had exactly the same symptoms as the first attack, divided into three periods, but less intensity. Neither the age of the patient nor the severity had any influence upon the recurrences. All treatments were tried, with the best results from a combination of mercury and arsenic. The only effect of salvarsan was to improve the general health and thus aid in fighting off the disease. Time alone will prove if complete sterilization with arsenobenzol will control the subsequent attacks.—Fage, Amiens, *La Clinique Ophthal.*

WILLIAM SPENCER, M. D.

OCULAR TUBERCULOSIS.—The eye being the only organ in the body which

can be constantly under visual control, is especially important in the study of tuberculosis. From experiments, ocular tuberculosis is now shown to be generally primary and not secondary, as was heretofore supposed. The author has had great success with the medical treatment. The chief point to bear in mind is that progress will be very slow and that discouragement and change of therapy is fatal to a case. Six or eight months elapse before any amelioration is noted. Iodid is fatal to the Koch bacillus and upon this the therapy is based. Twenty to forty drops of iodogenol (a trade preparations of organic nature) is given after meals over a period of one year. In addition, cod liver oil is rubbed in daily over various parts of the body. The following combination is used:

Cod liver oil	200.0
Guaiacol	15.0
Essence of citronella	4.0

He then presented three cases which he had cured. The first, a fourteen-year-old girl, after suffering for three years, showed infiltrated cornea, posterior synechia, cloudy vitreous and only light perception. She was given twenty drops of iodogenol each day, together with frictions of the above prescription and 60 grams of raw meat. After eight months vision is 1-4 and 1-6. This case could not tolerate potassium iodid, but did beautifully under a peptone of iodin.

The second case, one of chronic dacryocystitis, which did not respond to treatment. Nasal examination revealed lupus ulcer with enlarged cervical glands. Treatment taken for four years and patient has now been free from all trouble for a long time.

He also reports a case of lupus in a girl of twelve years which resolved. He presented a woman who had been declared incurably blind by three oculists, following an injury with a feather and subsequent keratitis, which the author diagnosticated an ocular tuberculosis of traumatic origin. This patient to-day is in possession of fair vision, comes alone from her home and is already able to read.—Abadie, *La Clinique Ophthal.*

WILLIAM SPENCER, M. D.

THE THYROID ORIGIN OF HEMORRHAGIC METROPATHICS.—Sehrt says while it is not possible in a case of goiter to say whether there exists a condition of hypo or hypersecretion of the thyroid, yet according to Kocher, the question may be determined by an examination of the blood. In both conditions there is relative, neutrophile leucopenia and relative or absolute lymphocytosis, but the coagulability of the blood will distinguish between hypo and hypersecretion. In Basedow's disease (hyperfunction) the coagulability is retarded, while in cachexia strumipriva and in myxoedema (hypo-function) it is accelerated. The relationship between the thyroid and the genital system suggested the question, what influence functional disturbances of the thyroid exert in menorrhagia. Among 20 cases of uncomplicated cases of uterine disease, 13 patients exhibited pronounced indications of hypofunction of the thyroid. In six of the remaining seven cases the coagulability of the blood was distinctly diminished and only once was there no relative neutrophilic leucopenia and no lymphocytosis. It may therefore be possible that a disturbance exists in the relationship

between the thyroid and the ovary in those cases of hemorrhage that cannot be explained anatomically, and some cases of hemorrhage may be regarded as abortive forms of myxœdema.

The author is also inclined to favor the thyroid origin of eclampsia. It is probable that the essential difference between tetanic and eclampsia is not quite so certain, and that hypofunction of the thyroid may predispose to an attack of eclampsia. It would at least seem advisable in eclampsia to have regard to the status of the functional activity of the thyroid. The case is cited of a 22 year old girl who suffered from serious hemorrhages since a delivery three years ago. This patient had a pronounced deficient functional activity of the thyroid, and at her delivery she had eclampsia. This same condition may also be a factor in habitual abortion.—*Obstr. Zentralbl. f. Gyn.* 1913-1098.

THEODORE J. GRAMM, M. D.

PROPHYLAXIS OF UTERINE CANCER.—Prof. Bossi (Genoa) after commenting on the difficulties of the cancer problem, says it is illogical and contrary to the purposes of prophylaxis to attempt to find prophylaxis on early diagnosis, so that hysterectomy may be performed. This he says is surgical treatment, but not prophylaxis. The objective point of gynecology is to find the means of preventing the development of cancer. This only is actual prophylaxis. From his many years of clinical experience Bossi believes such means exist, and he has been able to demonstrate that the development of epithelioma of the cervix is prevented when by means of minor operations the original chronic inflammations are removed. In the same way, curetting the hyperplastic changes in the endometrium will prevent the development of corpus cancer. The author is able to review about 7,000 personal cases in which he has operated upon the portis vaginalis, and in none of these cases even after many years has he been able to determine the development of cancer. He believes that in most cases the origin of cancer may be found in chronic inflammations and especially in such as were treated with chemical cauterizing agents. Cancer not being contagious, we may assume it is not of microbic, but of histological origin. The assumption that cancer mostly starts in injuries, originally benign, but not properly or not sufficiently early treated, is quite likely. The proper plan therefore is to establish a propaganda of prophylaxis whose cardinal principle must consist in early, conservative surgical treatment of benign diseases of the cervix and endometrium.—*Zentralbl. f. Gyn.* 1913-1000.

THEODORE J. GRAMM, M. D.

EARLY RUPTURE OF THE MEMBRANES.—Bassett's (Breslau) studies of the influence of early rupture of the membranes upon labor and the puerperal period have shown that the labor is not shortened thereby, that young primiparae and old multiparae are especially predisposed to its occurrence; in malpositions of the child it often occurs; prolapse of the cord is favored; cervical lacerations are rare; operative intervention in the labor is frequently called for; fever in the puerperium is quite frequent; uterine atony while infrequent, is sometimes serious; the maternal mortality is not increased; and the infant mortality is about 1.6%.—*Zentralbl. f. G. u. G.* Vol. 75-566.

THEODORE J. GRAMM, M. D.

THE TRANSFERENCE OF VAGINAL GERMS TO THE CHILD DURING LABOR.—Under this title, Noack (Halle) has made a most interesting study of the diseases affecting the new born and the mother herself induced by mucorganisms of the vagina. Briefly stated the author has shown that to this cause may be ascribed pemphigus simplex neonatorum, erysipelas, gonorrhœal exanthemata, gonorrhœal conjunctivitis and a similar inflammation from other germs, dacryocystitis, gonorrhœal joint diseases, pneumonia, otitis media, meningitis, gastro-enteritis, pseudo-diphtheria, simple and gonorrhœal stomatitis, thrush, puerperal mastitis, mastitis neonati, septic umbilical affections of the child, vulvitis, and vaginitis of the infant, and proctitis.—*Zentralbl. f. G. u. G.* Vol. 72-739.

THEODORE J. GRAMM, M. D.

CARCINOMA OF THE VULVA.—Rupprecht (Dresden) from a number of cases of carcinoma of the vulva which he has carefully studied and described, concludes that carcinoma of the vulva belongs to the less malignant forms of carcinoma. Metastases to abdominal organs are rare and some cases have had a very slow course. Even with incomplete operation 41% of the cases are curable. With total extirpation of the vulva and removal of the vaginal glands still better results may be obtained. In removing the iliac glands, single glands should not only be removed, but also the entire inguinal fat. Advanced cases should not be operated when the vulva is immobilized by the disease, the urethra and bladder surrounded, and the inguinal glands immovable and perhaps the iliac glands affected.—*Zentralbl. f. G. u. G.* Vol. 72-664.

THEODORE J. GRAMM, M. D.

AETIOLOGY OF MELAENA NEONATORUM.—Wolff (Giessen) concludes his article on the origin of melaena neonatorum from retrograde embolism by pointing out that he was able to produce melaena by means of injections into the umbilical vein of young dogs. He was able to demonstrate a thrombus in the umbilical vein with circulatory disturbances, necrosis and thrombosis as the cause of ulceration and hemorrhage into the duodenum of a child dead from melaena. He was also able to show the permeability of the vascular channels for retrograde embolism of the umbilical vein to the stomach and intestinal walls. From these three points the author concludes that the explanation given by V. Franque for the origin of these cases is correct. The author also described a case of valvulus which occurred with all the symptoms of melaena.—*Zentralbl. f. G. u. G.* Vol 72-438.

THEODORE J. GRAMM, M. D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN

PHILADELPHIA

ARSENICUM IODIDE IN CORYZA.—By H. F. Bishop, M. D., Alhambra, Cal. This remedy has received scant attention in the *materia medica*; in fact, unless it has been recently proven, our indications for its use are largely those gained from clinical experience.

Arsenicum iodide has been mentioned by a number of our *materia medica* practitioners as one of the most potent remedies in hay fever, special stress being laid upon its ability to produce excoriating discharges with much sneezing, irritation of the conjunctiva and itching of the eustachian tube, with enlargement and irritability of the follicles upon the posterior pharyngeal wall.

During the past few months I have successfully employed arsenicum iodide in a number of cases of acute coryza with symptoms of hay fever type, but of less severity. The individual in whom it is a suitable remedy is generally of the nervous type.

One symptom which has not been mentioned, so far as I can discover, is great aggravation by sneezing. The arsenicum iodide patient feels that he has taken a slight cold, but he is taking remedies and still hopes that the symptoms will pass off; the nose and throat are moderately irritated, but so far there has been no sneezing, which the patient from past experience has learned to dread; then he does sneeze and immediately, instantaneously, there is a change; before he draws the next breath there is irritation in the nasal passages, slight itching in the eustachian tubes and increased discomfort in the pharynx. With three or four sneezes the coryza has established itself. Such a patient will derive the greatest relief from arsenicum iodide, 3x before or soon after the sneezing begins.

I have given arsenicum iodide to one patient who has some atrophic tendency of the post nasal space and pharynx in whom the post nasal discharges tend to be uncomfortably thick when he takes cold and the follicles upon the posterior pharyngeal wall become enlarged, red, and tickle most distressingly, especially at night. His colds being according to arsenicum iodide symptoms, and this remedy when given sufficiently early aborts the attack entirely. When it is given later it may be continued advantageously through the attack and modifies the distressing, tenacious character of the post nasal discharge and greatly lessens the follicular congestion.

Following the recommendation of various authors I have made considerable successful use of arsenicum iodide in tubercular patients having

bronchitis with profuse, free expectoration of muco purulent material. These cases usually receive four or five doses of the 2x daily.—*Pacific Coast Journal of Homeopathy.*

NUX VOMICA IN HEART DISEASES.—By S. S. Salisbury, M. D., Los Angeles. The nux vomica heart usually belongs to a man of energy, ambition and determination, whether he be male or female. He is never lazy, and although he may be physically sedentary, he is never so mentally. He is usually up and doing, generally trying to do the other fellow. His ambition may lead him too far, and he may over-reach himself and not always be successful in his projects, but he never knows when he is beaten, but is up at it or him again with renewed energy and determination.

He is like some of our automobiles where the engines are too strong for the rest of the cars, and, as a result, are soon ready for the repair shop or are worked off on some unsuspecting novice. So with the nux patient—his will and ambitions are too strong for his physical strength. He sees no need for taking a vacation. He prefers rather to stimulate and feed his tired energies. Neither has he time to attend regularly to the call of nature, consequently the bowels become constipated and the liver sluggish, and the portal circulation congested for a time, when diarrhoea follows, hence he has alternate constipation and diarrhoea.

He becomes irritable and impatient, and cannot bear to be crossed in any of his plans or ambitions. He likes to be the whole thing in business, politics or society. He is not fond of society, but uses it as a means of carrying out his plans. He is like the man who, when asked what he would rather do in the next world replied: "I would like to run the heavenly choir, I would select for this choir one million sopranos, one million contraltos, and one million tenors;" and, when asked about the basses, said, "Oh, I would conduct the choir and sing bass myself."

The nux patient is a fighter. Every little word offends, and he gets fighting mad if crossed or opposed. He is also very sensitive to cold, and, although he complains of being hot, he cannot bear the least draught.

He is a big eater and drinker, although he does not have much use for water, but prefers coffee or something more stimulating.

He eats and drinks in a hurry, for he is too busy to do otherwise. He feels better for a short while after eating, so when he begins to feel badly he eats again. He eats, drinks, works and sleeps in a hurry. He becomes drowsy after eating and especially early in the evening, and he sleeps so hard that he wakes by 3 o'clock in the morning, and his mind becomes too busy for him to sleep any more. He gets up tired and with a dull headache, drinks coffee or other stimulants and eats heartily, apparently oblivious to the fact that he has no appetite.

This overstrain goes on for a few years, when, naturally, the heart begins to show the result of the overstrain and he begins to suffer from shortness of breath from exertion, and complains of difficulty in breathing and fullness and pressure in the chest, especially when lying down. After he has tried digitalis, strychnine and more whiskey, he goes to a physician, who, upon examination, finds the heart enlarged, or later dilated, heart beats strong, pulse either full and strong, or, if heart is dilated, small and weak.

Then the physician's troubles begin for the patient is irritable, unreasonable, and demands to be relieved at once, as he must attend to business and cannot and will not afford to be sick.

In all such cases, especially if nitroglycerin or digitalis have been given in large doses, nux vomica will do more to give relief and to cure the patient than any other remedy. It should not be given in too strong doses. The third potency or higher is better suited to these cases than the lower potencies, or than the usual doses of strychnine.

It is indicated for the gastric disturbances and will relieve these symptoms as well as those arising from the heart lesions.—*Pacific Coast Journal of Homoeopathy.*

KALI BICHROMICUM.—T. F. H. Spreng, M. D., Sioux City, Iowa. Kali bichromicum has been selected for the subject of this paper because it is a remedy which is frequently indicated in catarrhal troubles of mucous membranes throughout the body. In its catarrhal disorders there are thick, ropy or stringy, yellowish or yellowish-green mucous discharges. It produces a slow but intense inflammation of the mucous membranes wherever it attacks. If about the eye, we have a thickening of the conjunctiva, redness, smarting, burning, bleeding, ulceration in small patches and spreading ulcers. The discharge from the eye is tenacious, thick, ropy and yellow; it clings to the handkerchief and is drawn out in ropes. From the ear the discharge is thick, ropy and of a similar character. It produces ulceration of the mucous membranes of the ear and a catarrhal state of the internal and external ear. The Eustachian tube is closed up, so that the middle ear cannot be inflated. An inflammatory condition of the middle ear comes on, an abscess forms and the drum ruptures. In the outer canal there is ulceration, inflammation and swelling and the ear becomes closed up; the discharge is thick and ropy. The nose, throat, trachea, bronchi, bladder, all partake of this catarrhal condition and from all the discharge is thick, yellow, ropy and sticky; like glue it draws out in strings and ropes, tough, jelly-like and when it settles down it forms hard masses.

The mucous membrane of the stomach, too, falls under the influence of kali bichromicum. The drug is so irritating that it causes gastritis. Thus it produces gastric symptoms varying in severity all the way from those of simple indigestion to those of malignant disease of the stomach. In the milder forms of dyspepsia we find it indicated where there is headache, the pain usually being supraorbital. This may be periodical in its return, but is particularly excited by gastric irritation. Although it is neuralgic in its character, it is reflex from gastric irritation. Another form of headache which is associated with these gastric symptoms is one of peculiar kind. The patient is affected with blindness more or less marked, objects become obscured and less distinct, the headache then begins. It is violent and is attended by aversion to light and noise, and the sight returns as the headache grows worse. Other remedies having blinding headaches are Causticum, sometimes indicated for blindness with the headache, but not diminishing as the headache increases. Natrum mur., iris ver., psorinum and silicea. In the latter remedy the blindness comes after the headache.

With the headache of kali bichromicum the face is apt to be blotched and bloated and covered with pimples or acne. It is also sallow and yellowish as if the patient were bilious. The whites of the eyes are yellow and a little puffed. The tongue is thick and broad and scalloped on its edges, as though it had taken the imprint of the teeth. The stomach seems to swell up immediately after a full meal, just like lycopodium. The bowels are constipated or else there is early morning diarrhoea, as you find under sulphur, rumex, bryonia and natrum. sulph.

The stools are watery and are followed by tenesmus. These are some of the gastric symptoms which will yield to kali bichromicum. They are particularly apt to occur after excessive beer drinking. Kali bich. is one of the best remedies for the chronic effects of excessive indulgences in beer and ale.

We also find kali bich. producing gastritis, herein very much resembling arsenicum. The vomited matter is sour and is mixed with clear mucous. You see how kali bich. everywhere excites an over-production of mucous. The vomit may be bitter from admixture of bile. It is renewed by every attempt at eating or drinking and is associated with a great deal of distress and burning rawness about the stomach. With this kind of vomiting you may give kali bich. in the vomiting of drunkards and in the round perforating ulcers of the stomach.

In dysentery kali bich. is sometimes indicated. The disease occurs periodically in the spring or early summer. The stools are brownish and watery, mixed with blood and attended with great tenesmus. The distinctive symptom is the appearance of the tongue, which is dry, smooth, red and cracked and shines like a glass bottle.—*Iowa Homoeopathic Journal*.

SOME HOMOEOPATHIC HEART REMEDIES.—Dr. Fritz Askenstedt contributes a very scientific article to the *Medical Century* dealing with the action of homoeopathic heart remedies in diseases of the heart. Among the remedies referred to are the following:

Aconitum napellus.—Aconite attacks all nitrogenous tissues, affecting particularly the central nervous system, the nerves, and the muscles. It has a special affinity for the ends of the sensory nerves, causing, at first, a smarting and tingling of the skin and mucous membranes, followed by diminished sensibility.

The first noticeable effect of aconite upon the heart is a direct stimulation of the myocardium, giving rise to a quick, full and strong pulse. This is soon overcome by a more marked stimulation of the cardio-inhibitory center, which greatly reduces both the force and frequency of the heart beats and, as a result of this reduced cardiac activity, the blood pressure falls, notwithstanding a stimulation of the vaso-motor constrictors, and a sense of chilliness is experienced. In toxic doses, paralysis of the inhibitory mechanism follows, and there is a marked augmentation of the irritability of the cardiac muscle accompanied by weakened contractility and conduction. The heart's action is violent, gradually weakening, and eventually its rhythm is interrupted by extra-systoles, auricular fibrillation and heart block.

Under the moderate doses of the provers the chilliness is often followed by a reaction of dry heat, restlessness, fever and thirst. The thermotoxic

or heat regulating function is disturbed, so that the temperature of the body tends to fluctuate with the temperature of the surroundings, a lack of balance observed in all fevers. The vaso-motor center, at first slightly stimulated, becomes depressed, permitting a dilatation of the smaller arteries and consequent arterial hyperæmia.

The powerful but ephermal action of aconite upon the nervous system and circulation renders it indicated in cases of arterial hyperæmia or acute infections attended by chilliness, followed by arterial and bodily excitement, sensations of tingling and heat, fear and fever. It is evident that a slow pulse—out of proportion to the amount of fever—and a low blood pressure, as is usual in pneumonia, is no contraindication for the use of aconite.

In diseases of the heart, it should be considered especially in connection with the myocarditides of acute infections (rheumatism, pneumonia), even in the advanced stage manifested by extrasystoles, auricular fibrillation, and heart block. "Stitches in the cardiac region;" "pressive pain about the heart;" "palpitation of heart, with anxiety;" "precordial anxiety" are subjective symptoms under aconite suggesting myocarditis.

Arsenicum album.—The destructive action of arsenic upon protoplasm in general is observed upon all the tissues of the heart, especially upon the myocardium. Endocarditis and myocarditis, with fatty degeneration and dilatation, are its most important lesions.

The pulse may be slow, weak, or irregular, but more often rapid, growing gradually feebler and finally becomes thready. The palpitation is worse at night, and attended by anguish. Owing principally to paralyzing effect of arsenic upon the muscular coat of the arteries, especially the mesenteric vessels, the blood pressure is progressively reduced and the stomach and bowels become congested. There is a sensation of burning in the chest, as elsewhere; also marked dyspnœa, hemoptysis, and, in various parts, dropsy, due to increased permeability of the capillaries.

Arsenic is most frequently indicated in fatty degeneration and dilatation of the heart from protracted fevers, as typhoid, malaria, pyæmia, and from various anemias and in old age.

Digitalis.—The symptoms of digitalis are such as indicate marked venous engorgement of the lungs (air hunger, pulmonary œdema, dry cough, hemoptysis); of the liver (enlargement of liver, and ash colored stools); of the kidneys (scanty, dark, turbid urine); of the extremities (coldness and dropsy); of the brain (vertigo, with great anxiety and faintness). Of the same import are the more general symptoms: great weakness, cold clammy sweat; sickly deathlike expression; nausea and vomiting. The symptoms are usually aggravated by movement.

Digitalis should be considered in all chronic cases of failing cardiac compensation, especially when attended by extra-systoles or auricular fibrillation. In threatened (lengthened a-c interval) or complete heart block in chronic heart disease, it is especially indicated.

Lachesis.—Acts primarily upon the cerebrospinal system, especially the vagus nerve, through which it affects the throat, larynx, lungs and heart. It also induces paralysis of the vaso-motor nervous system, though less so than other snake poison, and causes decomposition of the blood. The pulse is accelerated, often unequal or intermittent. There is a cramplike

pain in the region of the heart, with anxiety. Lying down causes suffocation. There is marked aggravation of symptoms after sleep and from touch. Through its vaso-motor action it produces heat and redness of face, and burning of the palms of hands and soles of feet. This renders it an especially valuable remedy for the palpitation and hot flashes occurring during the climacteric or in neurasthenia. It is also useful in threatening heart failure from diphtheria or asthenic fevers, as typhoid, pyæmia or septicæmia.

Lycopus virginicus.—But few animal experiments have been done with lycopus to ascertain its physiological action, but provings warrant the opinion that it causes stimulation of the vagus, with slow, weak pulse (even as low as 46); then through direct muscular action the heart beats become quick and irregular. That its continued use in moderate doses would lead to hypertrophy is apparent. During the stage of arrhythmia the blood pressure is lowered.

The symptomatology is like that of digitalis: slow or rapid, irregular pulse, with venous congestion. There is, however, much pain under lycopus, while digitalis is almost free from it. The muscles and articulations are especially painful. The urine is scant and contains oxalate of lime crystals. The characteristic symptom of lycopus is a marked protrusion of the eyeballs.

The remedy is of great value in functional disorders of the heart, in exophthalmic goitre, in rheumatic heart affections, with or without hypertrophy and extra-systoles.

Spigelia.—The action of this remedy has not been carefully studied. From its symptomatology it may be inferred that it acts as a stimulant directly on the heart muscle. Its affinity for fibrous tissues elsewhere renders it probable that it also attacks the endocardium and the pericardial membrane. Upon the blood vessels it has little or no action.

The appearance of symptoms is prompt and usually attended by much pain. There is violent palpitation resulting in hypertrophy, as evidenced by the symptom, "unusually violent palpitation of the heart that the prover could hear the pulsation, and the beats could be seen externally through the clothes." Motion aggravates palpitation and brings on dyspnoea. There is a constriction of the chest, with anxiety and difficult breathing. Cutting, tearing beneath left nipple, extending to region of scapula and left arm, worse during deep inspiration.

The remedy is indicated in myocarditis, endocarditis, pericarditis, and all hypertrophies of the heart, especially when of a rheumatic character. As an intercurrent it may be used in angina pectoris.

RACHITIS.—Since rachitis is really a disease of faulty metabolism and by the regulation of proper regime, especially dietetics, most beneficial results are obtained, the strictly medicinal treatment is comparatively insignificant. Medicines alone without these dietetic changes will accomplish little, but with these very satisfactory results can be had. And here, again, the truth of the best interpretation of Hahnemann's doctrine is exemplified, i. e., *not* the treatment of a disease, of a pathological process as such, not merely the correction of metabolic wrong *without* the underlying factor that produces this—nothing short of treating the patient

behind the disease his individuality, his mental and physical organism as a whole and relation to the environment, his hereditary and developmental status; *the totality* in short which is the true pathological entity that should be the sole object of our treatment. The remedy so selected will be found the true curative medicine in any individual case. The cause of the interference in the production of a perfect bone tissue which is the keynote to the pathology of rickets is according to the great Berlin professor and specialist, Dr. Heubner, a general constitutional dyscrasia, which confession of ignorance of some tangible definite cause certainly justifies the homœop-therapeutic procedure of treating the patient's totality. This being acknowledged, it is a clinical fact that most beneficial results in the treatment of rachitis have been obtained from some half a dozen medicines, i. e., phosphor phos., acid, phosphate lime calcarea carb. and silica. Phosphorus is supposed to exert a specific selective action upon the epiphyses of long bones, inducing an inflammation of the bone forming cartilage, thus presenting the strongest resemblance to the rachitic process, and its consequent homœopathicity. Symptoms of the nervous system and respiratory tract lead to it. Delicate, waxy, anemic and emaciated subjects. The spasmodic affections, restlessness and insomnia are especially benefitted by phosphorus. Rachitis is often associated with precocious children and phosphorus meets both conditions.

Calcarea phosph.—Rickets has been traced to lime starvation, usually brought about by the loss of power to render lime assimilable. The early diagnosis of rickets as seen in a chronic state of dyspepsia independent of the manner of feeding, sweating of the head, especially during sleep anemic with flabby muscles, etc., are all met by this medicine. Especially indicated in defective nutrition, sunken, flabby abdominal walls, large fontanelles, delayed dentition, cranial bones brittle, diarrhœa and *pains in joints*. If there is any medicine that will hasten the transformation of osteoid into true bony tissue calcarea phos. will make a successful claim.

Phosphoric acid.—Diarrhœa and bone pains with great exhaustion call for this remedy. The little patient seems very apathetic with blue rings around eyes. Profuse sweat.

Calcarea carb., has the large abdomen, swollen cervical lymphatics, whitish, frothy diarrhœa, perspiration during sleep, especially of head and neck, pungent odor of urine. Nettlerash. Rickets is often associated with nettlerash from dilated stomach. *Blue appearance of sclerotic.*—*Pacific Coast Jour. of Hom.*

ARSENICUM.—Briefly to recapitulate on an article on arsenicum by Dr. L. F. Ingersoll in *The Clinique*, we find the following indications which are excellent: Headache relieved by cold applications while all other conditions, including burning in eyes and nose, and excoriating coryza are relieved by heat. Pain in the throat relieved by hot drinks, food, etc. All discharges, including vaginal, excoriating. Teeth are sensitive. Peculiar thirst. Burning in the stomach with loss of appetite and nausea. Cardiac weakness with anxiety. "Great restlessness, profound exhaustion, peculiar thirst, rapid emaciation; aggravation after midnight and amelioration from warmth." These symptoms, when presented, make the picture complete.



PRIMULA OBCONICA.
PRIMROSE.

THE HAHNEMANNIAN MONTHLY.

JUNE, 1914

THE UNSUSPECTED BUT POISONOUS PRIMROSE.

BY

JOSEPH C. GULRNSEY, A. M., M. D., PHILADELPHIA.

PRIMULACEAE.—THE PRIMROSE FAMILY.

Primula. Primrose. English Primrose. Cowslip.

"A family of 28 genera and about 350 species, distributed throughout almost the entire globe; especially abundant in the north temperate zone. Their economic importance is almost wholly in ornamentation, some of our most pleasing household flowers, primroses, cyclamens, etc., pertaining to this family. Medicinally many species are interesting because of their saponin and other principles, or of salicylates. . . . *Primula obconica*, is a well known irritant poison, the symptoms being those of saponin poisoning. It is used in the treatment of eczema and other skin diseases."

—THE NATIONAL STANDARD DISPENSATORY, 1906.

About thirty-five years ago a species of primrose new to science was introduced from China into Europe and was named *Primula obconica*. This pretty plant soon became a favorite in greenhouses and in private houses and ten years later it was widely cultivated in the United States. It is a winter flowering pot-plant, bearing lilac or pinkish blossoms, is long stemmed with scallop-toothed leaves growing from the base of the plant and beset with sharp hairs.

This plant, *primula obconica*, the "primrose," must not be confounded with *primula veris* (also called *officinalis*) which is the well known "cowslip." Although the two plants are very dissimilar, they are members of a family of close relationship and the *primula veris* (*officinalis*) is often called "primrose" while it really is "cowslip." As a further differentiation, the *primula veris* (*officinalis*) is a hardy plant, which grows freely out of doors, while the *primula obconica* (primrose) is strictly an indoor plant, growing in greenhouses or as a house plant.



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Who would think that the demure and dainty primrose is as poisonous as the poison-ivy and that it causes nearly identical skin symptoms in appearance and in torture!

Poison-ivy, appearing as vine or shrub or tree, is found growing profusely in field and fallow, in wood and ravine, in marsh and meadow, in natural rock and stone fence, and along the public roadside. Only because the primrose is not so omnipresent as is poison-ivy do fewer people suffer from its infection. Its poison nevertheless is as easily absorbed and its baneful action is as pronounced as that of poison-ivy.

The familiar little "primrose," botanically known as *primula obconica*, is largely advertised and the following attractive statements appear in the catalogues of some of the most prominent seed, plant and flower houses in the country:

"Profuse bloomers and among the first and most popular of the winter and spring flowering window or green house plants." "Plants are sturdy and robust; are of the easiest culture in window or conservatory, flowering profusely and continually, with but little care. Packet of seeds, ten cents." "Delightful and graceful when in flower, it makes a useful decorative plant for the house or conservatory." "Indispensable for winter or spring decorations in the house or conservatory. They are of the most important winter blooming pot-plants."

The catalogue of a particularly well known house truthfully but most unwittingly says: "These plants are not so well known as they deserve." As a matter of fact, if they were "*so well known as they deserve*" they would largely disappear as house plants until the public is sufficiently educated to enjoy them at a respectful distance, i. e., *the primrose must not be handled*. It may be looked at and admired, it may be cultivated and developed—for to the horticulturist it offers a wide range of possibilities in the producing of new forms of larger and more handsome flowers—but it still remains poisonous. As a proof of this, I cite the following experience, told me by Mr. G. D. Clark:*

"Horticulturists are fully as desirous of having harmless plants as is the medical profession and to accomplish this end they strive to eliminate all toxic elements of plants. Mr. George Arends, Ronsdorf, Germany, a famous hybridizer, experimented with the primrose and attempted to produce a more

*Henry A. Dreer Company, Seeds, Plants and Bulbs, Philadelphia.

beautiful flower (plant) *without* its poison. With this view he crossed the *obconica* with the *megasae folia*. The product was a larger and more beautiful flower—but its poison remained!”

Although beautiful in appearance, “so sweet and innocent looking,” the primrose should be handled only by gardeners and florists who know the danger of its poison. As a matter of safety to all plant and flower lovers, it would be a protective rule to place a label of “DO NOT HANDLE” on every primrose sold.

Since I began investigating the poisonous properties of the primrose, I have found a general confirmation of its infectious character among private families and professional horticulturists. If those who read this paper will interrogate botanists, florists and hybridizers they will acquire much practical information as to the poison of the primrose.

The Country Gentleman, March 14, 1914, says:* “The fact that *primula obconica* is poisonous to the touch was discovered in 1889, but the discovery was slow in coming to general attention. . . . There can be no doubt that innumerable cases diagnosed as ordinary eczema. . . . *have really been the result of handling poisonous plants.* *Primula obconica* (primrose) is one of the most dangerous and therefore deserves special attention. Dr. A. Nestler, of Prague, the leading authority on primrose poisoning, thinks no one is absolutely immune from the effects of this plant. He cites cases of gardeners who, after handling it with impunity for years, have finally become infected. . . . Sometimes the effects are almost imperceptible—in a few cases they have led to fatal attacks of blood poisoning. . . . The poison of the primrose occurs in its *glandular hairs*, which break easily and discharge an irritating fluid which is absorbed into the skin.”

Thus, like poison-ivy, it is direct contact with the primrose, the actual handling of it, that causes the poisonous effects. The hands once affected they, like the infection of poison-ivy, can poison any other part of the body they touch. A case is reported of the infection of a lady by kissing her aunt who had contracted a facial primrose poisoning. After suffering

*The Poisonous Primrose. By Calvin Frazer.

thirteen months, she applied to a physician.* An unhappy concomitant of primrose poisoning is that the more often one is infected the more liable he becomes to re-infection—just like poison-ivy! After infection, the symptoms, as in poison-ivy, may appear in a few hours or not for several days—even as many as ten days. At the very outset of the symptoms the skin becomes red and swollen, accompanied by an intolerable itching, soon followed by blisters, pustules and perhaps severe ulceration—in every respect following the dermatitis of poison-ivy.

PROPHYLAXIS. After the plants have been handled and before the disease has appeared, infection may be averted, as in poison-ivy,† by thorough washing of the hands in 96 per cent. alcohol and then scrubbing them vigorously with strong soap and water. All persons who handle *primula obconica* should wear gloves while doing so and should burn all leaves that are cut or fall off. At the first sign of infection any plants that may be in one's room must be removed immediately and all objects with which they have been in contact must be thoroughly cleansed.

My attention was called to the primrose as a poisonous house-plant (and consequently a source of much danger to a household) by a dear old lady, Miss Sarah J. Williams, of Massachusetts, who wrote me in February, 1914, that she was suffering exceedingly from a dermatitis which she considered a form of "shingles," and asked my advice. Owing to the distance between us and knowing almost nothing of her mode nor habits of life, her environment, etc., I expressed no opinion regarding the nature of her illness. In a short time the cause of her condition was fully revealed as the following extracts from her letters show. I quote her exact words because they express so adequately and accurately her *proving of the poisonous primrose!*

February 13, 1914.—"I have had something come to me that is new to me. The doctor did not say it was a form of shingles but he said old people are apt to have something of the kind or rheumatism in the hands. Another said it was one form of shingles that came in the hands and face. . . . It is going on now the ninth week, and I am so worn and weak from it.

**Homoeopathic World*, May 1, 1914, P. 229.

†See my papers on Rhus Poisoning, Poison Ivy, *HAHNEMANNIAN MONTHLY*, March, 1913, and May, 1913.

Oh, *I am so tired I feel as though I hardly had strength to speak.* The first I knew of any trouble, my fingers broke out all down between them with water blisters, which would keep full for a whole week, then would dry down and peel off; I hoped they would soon heal but after peeling all over they began to blister again. They itched and burned so that it did seem I would go wild until alleviated by a weak solution of carbolic acid. Some days my face is so swollen that I am a sight to look at; my nose swollen, very sore and all scabbed on the inside." Rhus tox 200 was sent her.

February 26. "My eyes are swollen all around them and red and the ball of the eye inflamed so I have to remain in my room with the dark green shades down."

March 5. "Have had a very hard time for eleven weeks, since the first water blisters appeared on the inside of my fingers. In that time the skin has twice peeled from my fingers. The eruption appeared in my face at the corners of mouth, across upper lip, under nose and up into my nose, which was exceedingly swollen and sore. Then, worst of all, it went to my eyes which became dreadfully swollen and red and the ball of the eye greatly inflamed, compelling me to be in a perfectly dark room."

March 12. "Am a sight to look at now, but hands and face not so much swollen as they were. Something has come out all over my face on my nose and forehead that seems like shingles—every pore a little separate vesicle—also on both upper and lower eyelids and the inside of lids an angry looking red and can only open them a little way. It is twelve weeks since the first water blisters came on my fingers and I am badly worn by the disease—have become very thin. My sister noticed how very thin I am getting and we wonder at it, since I eat so well!"

"Now I have something to tell you that has come like a vast surprise to me! I have plants in my room and last autumn my uncle gave me a beautiful primrose which has been much admired. *If you will read in THE COUNTRY GENTLEMAN of March 14, 1914, you will see my trouble fully explained, and it is all laid to the primrose!!!* As soon as my family read it last night they entered my room and took the primrose away and to-day my room is being fumigated."

R *Primula obconica* 6. As there is no dosage reported for its use, I had nothing to guide me. I requested Boericke & Tafel,

Philadelphia, to make me a sixth decimal dilution which I sent my patient with directions to take every two hours.

March 15. "My eyes are much better this morning, face and hands not swollen, but all cased over with a dry, rough skin, that there can be no open pores. No natural feeling in my hands—they feel so tight and drawn. My fingers have peeled twice, a dry skin coming off; they look very red, as if burned. There is so much primrose poison in me that if it gets out of my system by another winter I shall be thankful."

March 22. "Am happy to report that I am much better but there is great room for improvement yet. My eyes are so much better that they can bear the light. My cheeks are smooth and almost natural; chin still red and scaling but improving; hands and fingers have done peeling but are very red and tender—look as if they had been burned. Am still very weak—no ambition to work, though I am naturally fond of work. Have become very thin even with my good appetite."

R *Primula obconica* 6 continued, every two hours.

March 30. "Am slowly but surely improving. The glaring red that has been in my face and hands is gone and the swelling subsided. I think I look natural now, but am as weak as any patient after a fever. It is a great relief to have the burning fever gone, even if it does leave me so weak."

April 9. "Am well and have almost forgotten about my dreadful sickness—it is a nice thing to forget."

No medicine has been sent her since the second supply of *primula* and June 12 she remains well.

In accordance with what we know about the danger of handling poisonous plants (unfortunately they are numerous) I consider it the duty of every physician, particularly of every dermatologist, to carefully ascertain the environment of each case of dermatitis coming to his office and in addition to the usual questions of "family history," etc., he should by most diligent inquiry learn whether his patient has handled or been in contact with a poisonous plant.

Arthur Whitfield, M. D., F. R. C. P. (Lond.), Physician for Diseases of the Skin, King's College Hospital, reports in *The Lancet*, "Three Cases of Eczematous Dermatitis Produced by Poisonous Plants," two of which were poisoning by *primula obconica*; the other was one of *poison-ivy*. In commenting upon these cases he said: "I wish to draw attention once more to the great importance that attaches to the thorough working

out of local causes in the production of so-called acute eczema. . . . The point which I wish to emphasize is that it is not enough to make the diagnosis of acute eczema, but that it is the duty of the specialist to make every effort to run to earth the cause of the eruption before contenting himself with local treatment and, possibly, the internal treatment of some hypothetical disorder." He then narrates two cases of dermatitis, which, as stated above, proved to be poisoning by *primula obconica*, in two ladies, each of whom grew primroses in their greenhouses, although one of them said she had handled it for years with impunity.

We learn from *New, Old and Forgotten Remedies*, Collected Arranged and Edited by E. P. Anshutz, M. D., Philadelphia, that the entire fresh plant in flower with root is used in the preparation of *primula obconica* as a medicine. The pathogenetic effects were produced from handling and otherwise coming in contact with it. The following brief summary of symptoms was taken from various papers: Syme, *British Medical Journal*, *London Lancet*, *Homoeopathic World*, March, 1892, *American Homoeopathist*, 1897, p. 429; *New York Medical Journal*, January, 1898, p. 6.

SYMPTOMS.—Eczema moist, papular and excoriated on face and arms; cracking over joints and fingers as from frost; papular eruption on hands and chin, followed by desquamation—also on hands, wrists and fingers. Hands and fingers stiff and unusable. Deep seated blisters on fingers. Confluent blotches on face resembling urticaria. Eyelids greatly swollen, covered with large bullæ; eyes half closed. Eyelids stiff and immovable, resembling ptosis. *Great itching of the skin.* Eruption and itching, *worse at night.* Skin red, swollen, itching violently. Small papules becoming pustular. Eruption resembling scabies. Desquamation. Purple blotches. Great tension and *redness* of skin like erysipelas. Deep infiltration of tissues rendering the parts stiff and immovable. More itching, less burning. Worse at night.

Whitfield observed: "Subacute eczema affecting the eyelids and the contiguous portions of the cheeks, so that the skin was reddened, stiffened and had a tendency to crack. Very acute eczema of the left eyelids and cheek only; swelling so intense that the eye was practically closed and the curious fawn-coloured translucency which is so familiar in acute eczema."

In *primula obconica* (primrose) we have a medicament

which promises to prove of great value as an addition to our materia medica. Not only does it give good hope of being an efficient remedy in curing cases of poison ivy but judging from the very prominent and pronounced symptoms we have thus far obtained, it should be of immense value in erysipelas and all eczematous affections which are accompanied by (a) most intense and even agonizing itching; (b) redness of the skin; desquamation followed by the reappearance of the blisters, rash, &c.; (c) paralyzed sensation and paralysis of the parts affected (i. e., fingers, eyelids, stiff unusable, immovable, &c.); (d) great weakness accompanying the dermatitis, patient becoming emaciated in spite of good appetite.

Burning is present but does not appear to be nearly so prominent and "characteristic" as the itching.

Our immediate duty is to secure a thorough proving of its medicinal effects upon men and women. As it is a winter flowering pot-plant nothing could be more available for easy access. Characteristic dermatological symptoms often indicate the *simillimum* (open sesame) to acute or chronic cases, the cure of which has baffled all efforts. Especially valuable are prominent symptoms of the female organism in determining the choice of the remedy. Women "provers" have repeatedly shown marked ability as painstaking persistent observers in confirming or disproving supposed drug effects. In proving *primula obconica* (primrose) we possess a virgin field, the cultivation and development of which bids fair to yield brilliant curative results. Students, whether men or women, devoting a winter's work to the study of this medicament might make discoveries which would place their names high upon the roll of original investigation of healing forces.

We already, perhaps, know enough to warrant our prescribing it clinically (empirically) and by careful observance of its action and efficacy, when thus used, we may obtain much valuable practical knowledge. The drug, however, seems fully worth an investigation and a place in our armamentarium against diseased conditions where itching eruptions are largely in evidence. Therefore, dermatologists particularly should welcome this remedy as promising to be of signal service in many of their difficult cases. If it prove a dependable cure for ivy poison infection, for erysipelas, &c., labor will have been well spent in ascertaining its sphere of use.

SOME EXPERIMENTS WITH RADIUM.

BY

F. C. BENSON, JR., M.D.

(Read before the Society of Surgery, Gynecology and Obstetrics.)

THE element radium was first isolated some ten years ago and since that time many experiments have been carried on to determine its value as a therapeutic agent, mostly in the treatment of malignant disease. Until the past few years almost all the radium to be procured was manufactured in Europe and for that reason most of the experimental work was carried out in the foreign clinics. The medical literature of France, Germany and England during these years has contained reports of the work done in this line and with these you are probably familiar. Of late years, since the discovery of radium-bearing ores and the manufacture of radium salts in this country, there have been better chances for institutions and individuals here to procure sufficient radium for experimentation; yet there has been a noticeable lack of reports. This, I believe, is due to the fact that experimentors with any new therapeutic agent in this country are prone to wait until they are able to record end results, which, in the case of malignant conditions undergoing treatment, would not be for several years. Such reports as have appeared, however, have been very promising of good results, in properly selected cases. During the past year much attention has been called to radium as a possible aid in the treatment of malignant conditions by the writings of Kelly, of Baltimore, Abbe of New York, and others and it has been both unfortunate and unfair that so much space has been taken in the public press to argue the matter, pro. and con. Unfair, because from what I have read I feel that authorities have been misquoted in order to give the story more "human interest." Unfortunate, because I believe such stories read by persons afflicted with cancer have been the cause of their postponing operations which might have been life-saving, believing this new and wonderful substance would take the place of surgery. I have never heard an authoritative statement to the effect that radium was intended or expected to take the place of surgery in these conditions, but it has been the hope of all experimentors that this

method would be a *help* in the operable cases, and a *help* in the non-operable cases, and I believe results have proved that these hopes have foundation in fact. In this connection allow me to quote from a statement made by Dr. Howard A. Kelley, of Baltimore, probably the most ardent advocate of radium in surgery in America, he says in part: "Radium is not a specific cure for cancer. It does not take the place of surgery; it is only another help to it. Cancer patients, as before, in the early stages, must submit to operation. It is most useful in cancers on the outside of the body. In many of these cases it effects cures without pain and without deformity. It is especially useful in connection with surgery when it can be used to destroy vestiges of the tumor which the knife may have left behind. It can also be used to good purpose in irradiating the cancerous area preceding operation. There are certain structures which cannot be operated on—excised or seriously invaded—without disastrous consequences. Radium has cured inoperable cases of this kind. It is like a microscopic knife which goes after the individual cell. It is effective only when there is no wide dissemination of the disease." I believe that these statements will be corroborated by most investigators, but this is far from saying that radium is a "cure all."

Now, while it is probable that many of you are familiar with the physical properties of radium, it may be that some are not and that a short resume of that phase of the subject will help us to a better understanding of its possibilities as a therapeutic agent. Radium is found only in those minerals and ores which also contain Uranium and is itself a chemical metallic element closely related to Barium but having a much higher atomic weight (226) and, like all the elements of very high atomic weight, shows the property of radio-activity. "Radio-activity" has been defined as being "the property of spontaneously emitting radiations capable of passing through plates of metal and other substances opaque to ordinary light, and having the power of discharging electrified bodies." A spontaneous disintegration of the atoms characterizes all the radio-active elements and it is in this transmutation or splitting of the atom that the rays are shot out, some being material in nature, others electrical or of the nature of light. Radium continually gives off three rays with which we are particularly concerned here, namely: Alpha rays, which are electrically

charged atoms of very slight penetrating ability and may be shut off by a sheet of ordinary note paper. These are the rays which produce inflammation and necrosis of the skin when exposed for a sufficient length of time. Beta rays, which are more penetrating but can be completely stopped by 25 m.m. thickness of aluminum or 5 m.m. of lead. These are of some value in Radium therapy but are not nearly as strong as the third, or Gamma rays, which are the most penetrating of all and most valuable in therapeutics. These are the so-called hard rays, and are similar to the X-Rays in character. The Gamma rays of radium are only completely stopped by the interposition of ten centimeters of lead.

Radium, being exceedingly reactive, is difficult to prepare and after preparation unless carefully protected will react with the constituents of the air to form oxide, nitride and finally carbonate; so that stable radium is only obtained in the form of its salts, the bromide, chloride, sulphate and carbonate; the bromide and sulphate being the ones mostly in use. The radio-activity of the salt used will depend, of course, upon the radium element content, the bromide containing about 53.6 per cent and the sulphate about 70.2 per cent. These salts of radium are constantly undergoing a self decomposition, due to the bombardment of the decaying atoms, but for all practical purposes the life of the salt, if well protected, is constant. It has been calculated that it will take about 2,000 years for the disintegration of one-half of the radium content.

For surgical work radium may be used in several forms of applicators; for external work the salt may be glued upon a plate of metal and covered by a specially prepared varnish, but with this method the area to be treated must be protected by lead screens; or the salt may be sealed in a lead-lined silver capsule the face of which is composed of a very thin plate of aluminum or silver, the rays being thus screened automatically. Both of these applicators should be kept in a heavy leaden box when not in use. The first mentioned method is more generally used in France, while the latter method, that of Wichmann, of Homburg, is more generally used in the German clinics. The form of applicator which seems to have found favor in this country, and which is undoubtedly the best for internal work, is the tube shaped glass applicator of Dominici, Czerny and others. The salt is tightly packed in

small glass tubes which are enclosed in a silver or aluminum capsule which may be introduced into cavities or buried in the tissues. In the cases spoken of in this paper a Wichmann button, containing approximately 40 mg. (element) of radium bromide, was used for external work, and two Dominici tubes, containing approximately 10 mg. (element) each of radium sulphate, were used for internal work. I do not think there can be any hard and fast rules of technic laid down for the application of radium; so much depends upon the condition and location of the lesion under treatment and the amount of element being used. Necessarily, the larger the amount of radium used the shorter will be the time of treatment before an effect is obtained. It has been my practice to begin with exposures of from fifteen to twenty minutes daily; if a reaction takes place the sittings will be governed by the subsequent conduct of the lesion. If there is no reaction to the short exposures they may be lengthened, some of our cases having been exposed for from one to twenty hours before results were obtained. Just what cell changes take place during the application of radium I cannot say, but macroscopically we find that in the smaller destructive surface lesions the first symptom of change is an increase of discharge; secondly, a very marked decrease of the excretion which is followed in turn by the formation of a ring of scar tissue which surrounds the periphery of the growth, this ring contracting until the entire surface may become covered. In the laryngeal and bladder growths the first symptom of reaction shown has been an increased hyperemia which will gradually decrease until a condition of marked ischemia supervenes, this condition being usually followed by a decrease in the size of the growth. It must not be understood, however, that such reactions have been obtained in every case treated for in, roughly speaking, about ten per cent of the cases under observation there seemed to be no change of any kind to note. Some of these conditions were, macroscopically, very similar to those which showed very marked changes following the use of radium, and why they failed to react I do not know. It has been shown that the conjunctiva of the eyelids, the mucous membrane of the lips, and the tongue are locations which do not readily react, yet, on the other hand, we find remarkable effects following the use of radium in the larynx. These findings agree with the reports of other investigators. It is to be understood that the

above remarks apply to conditions which have been exposed to the Gamma rays only, for if the softer rays are kept in contact with the tissues for any length of time a very marked sloughing may follow. (This action is referred to elsewhere.) As a rule this action is to be avoided, as one of the most valuable aspects of the treatment of new growths by any form of radiotherapy is the possibility of causing a change in the lesion or checking its spread without establishing new channels for general dissemination, as might be the case in incisions made through infected structures or following some method which causes the growth to slough. In the actual application of radium it may be said that the rays must come into direct contact, as nearly as is practical, with the lesion to be treated to the end that the rays may be concentrated. In speaking of the results obtained in experiments I do not wish to take up the time necessary for the tedious recitation of case histories, but will report on groups of lesions, touching only on such cases as seem to have some specially interesting feature. There has been a series of some twenty cases of epithelial lesions occurring about the forehead, cheeks, eyes, lips, ears and nose, the ulcerated areas varying in size from a split pea to those advanced cases of rodent ulcer which involve such enormous areas; and varying in type from those degenerating warts which may or may not be malignant to those conditions which were undoubtedly cancerous in character. In those isolated small growths, which occurred well away from any mucous outlet, the result of treatment was very satisfactory, the majority of these healing in from five to twenty exposures of twenty minutes each. Some of these cases have been well for several years, showing no sign of recurrence. There was one case, a lesion of the cheek, which has recurred three times in a period of one year, but each time heals over after irradiation. There were two cases, both on the nose, which showed absolutely no reaction even to long exposures. In those cases which involved the mucous membrane of the nose and conjunctiva of the lids the results have not been so good, the size of the lesion being decreased, but in no case of this kind has a complete cure been effected. This was also found to be true in two cases of lip epithelioma with involvement of the vermilion border. These lip lesions are prone to be followed in time by lymphatic involvement and I believe that here radiotherapy should be used only as a postoperative

measure. One of these face cases deserves some special notice; a case of a rodent ulcer of long standing involving the entire right cheek, right orbit and the entire nose. This case had at one time been apparently cured by the use of the X-Rays but the condition recurred and seemed to spread faster than ever. After six months' treatment with radium, including bi-weekly exposures of thirty minutes and two exposures of one hour each, we find the following condition: there has been no change for the better in that part of the lesion involving the orbit (possibly the excavation is deeper) the cheek ulceration has not enlarged at any point and there are several islets of new epithelial formation there; one side of the nose is completely covered with new skin; the patient has suffered absolutely no pain. This case was an apparently hopeless one from the start, but I feel that the patient has been benefitted to this extent, at least, that his life had been lengthened and made more bearable. In another of these destructive lesions involving the orbit, in a very old woman, while the growth has not been noticeably checked there has been comparatively little pain and the lesion has remained free from odor and excretion; this being noticeable in all the superficial lesions under treatment. Experiments have been made with four cases of carcinoma of the tongue, two post-operative, two non-operable. The results here have been absolutely negative except for relief of pain, both post-operative cases going on to a rapidly fatal termination; the others are still under treatment. Two cases of carcinoma of the larynx have been observed, one of which is extremely interesting. This lesion was of considerable duration, first attacking the vocal cords and later the larynx proper. At first this condition was treated by applying the Gamma rays to the neck externally, without result. Increasing difficulty of phonation and even respiration demanded that something more should be done, so under the direction of the laryngologists in charge, a special silver applicator was made so that the rays could be brought into direct contact with the growth on the cords; this was found to be comparatively easy of accomplishment after the pharynx had been cocaineized. There was a change shown after the first exposure of thirty minutes, in that the involved structures became ischemic, but there seemed to be no result upon the growth in the larynx proper and as time went on it became imperative that something radical must be done to prolong life. Under

rectal anesthesia and following a preliminary tracheotomy the larynx was opened and found to be practically filled with a malignant mass. In this mass the two tubes of radium were buried, without any protecting covering, as here was a case where the destructive effect was desired; they were left in for twenty-two hours, having to be removed at the end of that time on account of reflex irritation, and it was found that almost the entire laryngeal mass had disappeared, in fact it looked as though it had been burned out with a hot iron. The lumen of the larynx was so much increased that the tracheotomy tube was removed at once. At the end of several days of comparative comfort this patient developed bronchopneumonia from which he died. It is to be noted that the above procedure was only indicated by the extremity of the case. The other case is still under treatment, with the usual resulting ischemia, and is improving continuously. Several conditions of the thyroid have been experimented upon, only those however which for one reason or another were considered inoperable. One case, that of a young woman presenting a typical picture of Graves' disease, was greatly benefitted, all symptoms being markedly improved. This woman had not menstruated for several months but is now menstruating regularly and her physician advises me that he considers her well. In another similar case under observation there was a marked decrease in pulse rate but the other symptoms persisted. Another interesting case was that of a woman fifty years of age who had a direct history of malignancy, both breasts having been removed for carcinoma. She had an aunt who died of malignant disease of the thyroid. Her thyroid was enlarged, hard and nodular, with a well defined lymphatic gland enlargement in the neck. She has had a number of exposures to the Gamma rays with the result that at the present time, six months since I first saw the condition, the thyroid is much smaller, much softer and the lymphatic gland is very much decreased in size. A curious fact concerning this case is that the patient has had what she claims to be two normal menstruations while the condition was under treatment, although she has passed the period of menopause several years ago. In malignant conditions of the breast there have been no experiments made with the original lesions, unless they were deemed unoperable, and in such cases the results were negative except to influence pain. In a series of cases

of recurrence in the scar after operation, the same decrease of pain has been noticed, but the growth itself seemed, if anything, to be stimulated to faster development. In these cases it is probable that the amount of radium used was insufficient. In those cases where there has been simply a recurrence in isolated lymphatic glands of the axilla the results have been much more satisfactory. Here the localized action of the rays upon an enlarged gland appears to be very beneficial, as in two of the four cases treated the gland has decreased in size and has given no further trouble; in the third case the gland became attached and went on to very marked involvement with fatal result. The fourth case is still under treatment and seems to be doing well.

What has been said regarding the experimental treatment of new growths in the breast holds good in the case of uterine lesions, i. e., it was not considered justifiable to experiment with cases which seemed to be amenable to operation; therefore, the experiments were carried on in non-operable and recurrent conditions. Two cases of recurrence refused treatment after a short time and I have been unable to trace them. A recurrence following a panhysterectomy, still under treatment, shows a marked decrease in discharge, feter and pain, but I can find no change in the pelvic or vaginal vault indurations. In another case, following a complete operation, there was a recurrence in the vaginal vault, pelvis and anterior abdominal wall. An incision was made in the abdominal wall and the radium tubes buried in the wound for twenty-four hours. Removal was followed by considerable sloughing of the wound which later healed. No change was noted in the malignant deposits while the patient remained in the hospital, a period of three weeks. Untraced. The following case is very interesting. A woman of fifty-four years with carcinoma of the cervix and involved broad ligaments. The surgeon to whom the case was referred refused to do a radical operation but later did a thorough cervical cauterization. Following this there were daily vaginal exposures to radium, well screened, the sittings varying from fifteen to thirty minutes, for a period of about one month. At this time the cervical lesion presented a healthy granulating appearance and the broad ligament induration was certainly less. This was five months ago. In a report recently received from the physician in charge of the case I am told that he can find no trace of induration and

that the cervical ulceration has healed. I have not personally examined the case since she left the hospital. I do not feel there was any chance of mistake in the diagnosis and I do not believe that this termination could have been brought about solely as a result of the cauterization. Some experiments have been made with inoperable bladder conditions, but most of these were so far advanced, and instrumentation caused so much prostration, that they had to be abandoned before any definite results could be obtained. In one case, however, of inoperable papilloma in an old man, we were able to continue the exposures until it was fully demonstrated that the rays were having a direct influence, a marked ischemia with diminution in size of the growth, following their application. The most rapid and remarkable result following the use of radium that I have seen was in the case of a long standing ulceration on the dorsal surface of the hand, in an old man, occurring in the scar of an old injury. The lesion was the size of a silver dollar and presented a clinical picture of epithelioma. After seven exposures of thirty minutes each this area was entirely covered over, with the exception of one very small spot. There was no other treatment used. This case was told to report, but has failed to do so. I feel if there had been a recurrence he would have returned for further treatment. I wish to say a word in regard to the application of radium in the body cavities. After considerable experimentation we have decided that the best screen for use in this work is a very thin tube of pure silver, in which the Dominici tubes are placed and which can be attached to variously shaped applicators so that the rays may be brought into direct contact with the lesion to be treated. This method we have found to be especially useful in applying radium to bladder and laryngeal growths.

As a result of actual personal experience with radium, I believe that there is a definite place for it in our therapeutics. That it will ever take the place of operative interference in malignant conditions I doubt, for it seems to me to be a local agent acting locally and, as such, cannot possibly be expected to change disseminated and systemic conditions. This statement refers to local application only; what the result of the intravenous use of radium in malignant conditions will be, remains to be seen. I believe its use after the removal of cancer is good practice. In inoperable, especially ulcerated growths, I

believe it is the best palliative we have at our command, as it seems to be a fact that it will decrease discharge and relieve pain in the most advanced cases. We have seen that in the smaller epithelial growths, without metastasis, it shows very marked results. That it appears to have some alterative action upon the thyroid gland in disease. That its exhibition in treating malignant growths in the larynx and in the bladder may be followed by good results. I have also attempted to show that, properly screened, its application will effect only abnormal structures and that its use is perfectly safe if correctly applied. This report is not intended to be conclusive in any way, but being the result of actual clinical experience, it is offered as an addition to what knowledge we already possess in regard to radium as a therapeutic agent; and it must be remembered that many of the cases here cited were inoperable and otherwise hopeless.

In closing, I wish to offer my thanks to the members of the Hahnemann Hospital staff who have so kindly aided me in this work by their interest and advice.

GASTRIC HEMORRHAGE.—Deaver (*Surg. Gynec. and Obstet.*, March, 1914), says that even a considerable hemorrhage does not always mean that there has been a hemorrhage from the stomach; it may occur in hemorrhagic inflammation of the biliary tract, the blood entering the stomach via the common bile duct and the duodenum; it may occur in carcinoma of the jejunum, or in ulcer of the duodenum, or from jejunal ulcer after gastro-enterostomy. Hematemesis may occur as a result of the rupture of a varicose vein about the cardia, this varicosity frequently being a sequel of cirrhosis of the liver. The idea that vicarious menstruation may account for some instances of hematemesis is ridiculous, says the author. While hemorrhage from a gastric or duodenal ulcer may be extensive, it is as a rule apt to be in small amounts, but recurrent. A hemorrhage from malignant disease of the stomach is not apt to be in large amount except as a terminal phenomenon.

X-RAY TREATMENT IN GYNECOLOGICAL CASES.—Zaretzky (St. Petersburg) says X-ray treatment may be recommended in the following conditions: In chronic oophoritis and hysteroneurasthenia, menorrhagia, pains and nervous symptoms, dysmenorrhœa, osteomalacia, prophylaxis against recurrence after operative removal of carcinoma of the uterus and adnexa, and as a palliative in inoperable cases, pruritus vulvæ, tubercular affections of the external organs and of the parietæ peritoneum. The author says also it should be the task of those who use this treatment to determine the several debated methods relating to the action of this treatment in fibro myoma.—*Zentralbl. f. G. u. G.* Vol. 72-320

**ERYTHEMA INDURATUM: ITS MANIFESTATIONS AND TREATMENT
WITH APPENDED DESCRIPTIVE HOMOEOPATHIC
REMEDIES.**

BY

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ERYTHEMA INDURATUM, or Bazin's disease, is a tuberculide. Usually to be seen in females, beginning during the age of adolescence and rarely to be seen after the thirtieth year.

Erythema induratum presents itself upon the anterior and posterior aspects of the lower limbs as node-like swellings which are bilateral. The disease is an intensely chronic one, ending either in absorption or breaking down into indolent ulcerations.

Erythema induratum has as its beginning variously sized indurated lesions ranging from a half to one inch in diameter. They are hard and they are indurated; of a red or purplish-red hue. This, for a time at least, is their only manifestation, the patient merely complaining of reddish, indurated spots upon the lower half of the calf and occasionally on the outer portions of the lower limb.

If the lesions do not undergo absorption they eventually undergo breaking down with consequent suppuration. The lesions are usually but few in number. The ulcerations are deep and irregular with a reddish or greyish base with a surounded zone of infiltration. They may undergo spontaneous involution with consequent depressed scars which are pigmented, but which in time eventually become white, which is quite characteristic of this disease, not unsimilar to the scarring of ulcerative syphilitic lesions.

Erythema induratum is usually found in young women who have to stand a great deal of the time, and who frequently give manifestations of tuberculosis elsewhere, although not always so.

The tubercle bacillus so far has not been actually demonstrated in the lesions of erythema induratum, but guinea pigs injected with fluid removed from the lesions of this condition

have developed tuberculosis. The author has had positive results from Von Pierquet and Calmett's reactions.

The lesions of erythema induratum must not be mistaken for ulcerating syphilides. The tertiary manifestations of syphilis are usually unilateral, whereas those of erythema induratum are bilateral. Syphilitic lesions usually appear later in life, whereas the lesions of Bazin's disease occur much earlier. Syphilitic lesions would respond quickly to specific treatment, whereas the lesions of erythema induratum are uninfluenced by such a procedure.

Erythema nodosum must as well not be mistaken for erythema induratum. If one will bear in mind that the lesions of erythema nodosum never tend to ulcerate, are usually upon the anterior tibial surfaces, and rarely upon the posterior aspects, that they undergo color gradations common to bruises during their involution, that they are more or less painful and tender and never form scars, one can readily differentiate this disease from the condition under consideration.

Varicose ulcers may as well at times act as a conjurer, but there is usually a co-associated phlebitis, the patient is much older, and there are marked varicosities.

Resolution can often be facilitated by keeping the patient in the recumbent position. The author has had unusually good results by insisting upon the patient elevating the limbs at right angles with the body at bedtime for fifteen minutes daily, which frequently has sufficed to cause the lesions to disappear before they had gone on to ulceration. If ulceration has not taken place, firm bandaging of the limbs is of decided good. A ten per cent ammoniated mercury ointment may be applied locally.

The daily use of Bier's hyperaemic cup is also of decided help.

Before giving the indicated remedy have the patient drink copiously of soft water (boiled or distilled), which will assist materially in getting rid of many of the intestinal toxines, and will give the indicated remedy more of an opportunity to act.

The patient should be put upon forced feeding and tonic treatment. Then compare the following remedies because here, after all, lies the success in the treatment of erythema induratum:—

ARGENTICUM NITRICUM—IX-6X.

Lesions.—Papular and pustular surrounded by a dark red or bluish-red areola. There is a tendency to ulcerate and the lesions may become encrusted.

Locations.—Not important; usually about anus and on back and lower limbs.

Sensations.—Itching, biting, stinging and pricking.

Worse.—From warmth, at night, cold food, sweets and during menses.

Better.—From fresh air, cold and pressure.

ARSENICUM IODATUM—IX-3X.

Lesions.—Papules or papulo-vesicular with tendency to pustulation. There is an irritating exudate which tends to form crusts.

Locations.—May be general, but usually found on hands, face, the bearded regions in particular, the genitals and on lower limbs.

Sensations.—Itching, stinging, burning and tingling.

Associated Conditions.—Usually some dermal, tubercular or constitutional disturbance, the patient being weak, pale, waxy looking with a hard, dense, leathery skin, and has a marked tendency to cervical adenopathy. There is an inclination towards chronicity, but is often indicated in subacute stages as well.

AURUM—2X-6X.

Lesions.—Papular, pustular, vesicular.

Locations.—Face, neck, chest and lower limbs.

Sensations.—Itching, burning and shooting.

Worse.—Cold weather, at night and in the open air, overuse of mercurials.

Associated Conditions.—Useful in old people, in the melancholic, in those of a suicidal desire, in the luetic and those of a tubercular diathesis.

BERBERIS—IX-6X.

Lesions.—Papulo-pustular lesions are the type usually met with, but any type of lesion may be present. The lesions are

surrounded by a red areola and have pus points on them, which dry up, leaving a brownish stain.

Locations.—Anus, hands and wrists, and the lower limbs.

Sensations.—Itching, burning, biting, gnawing and stinging.

Worse.—Scratching, warmth, rubbing and walking.

Better.—Cold applications.

Associated Conditions.—Some urinary and liver troubles.

KALI BICHROMICUM—3X-6X-12X.

Lesions.—Papules, pustules and erythematous lesions with tendency to crust and ulcer formation.

Locations.—Face, scalp and extremities usually.

Sensations.—Burning, itching and tearing usually precede the eruption.

Worse.—In the morning, pressure and heat.

Better.—Cold weather and in late afternoon.

Associated Conditions.—Renal, hepatic, catarrhal or rheumatic trouble, being usually a secondary manifestation of the same. Chronicity.

KALI BROMATUM—IX-3X.

Lesions.—Papules, pustules, tubercles, with tendency to undergo ulceration with the formation of crusts and scabs.

Locations.—Face, scalp, neck, shoulders and extremities.

Sensations.—Are of minor importance.

Associated Conditions.—Especially adapted to those who are large and fleshy, and especially in children.

LACHESIS—12X-30X.

Lesions.—Any type, of a dark red or bluish color, with a tendency to become gangrenous.

Locations.—Not of importance; mostly on left side.

Sensations.—Itching, burning, tingling and pricking.

Worse.—Open air, after sleep, left side, warmth.

Better.—Warm applications and the forthcoming of the discharge.

Associated Conditions.—The subjective symptoms are often more severe than the objective would lead one to believe;

throat inflammations, constipation, gastric and urinary troubles may accompany, as well as may some female conditions as the climacteric period.

MURIATIC ACID—3x-6x.

Lesions.—Papular, pustular, vesicular or crusted and vesicular.

Locations.—Face, especially about the mouth and alae of the nose, the neck, ears, thighs, and anus.

Sensations.—Itching, smarting and burning.

Worse.—Rest, warmth and touch.

Better.—Scratching and rubbing.

Associated Conditions.—May be dizziness, emaciation, adenopathy, anaemia, blood conditions and haemorrhoids in conjunction with the lesions about the anus.

NITRIC ACID—ix-6x.

Lesions.—Papular, pustular, vesicular and erythematous, crusted or fissured and ulcerative lesions, having a large, red areola around them and a very dense crust formation.

Locations.—Mouth, nose, hands, arms, neck, shoulders, penis, labia, perineum and anus, internal ear, and at times the hairy borders and the lower limbs.

Sensations.—Itching, burning and a lancinating pain as if from a splinter (pricking and stitching).

Worse.—After overuse of mercury, at night, change of weather, sweating and touch.

Better.—Cold air, lying, warmth and mild rubbing.

Associated Conditions.—May be emaciation, mental conditions, debility, leucic or tubercular diathesis, throat trouble, fever or some gastric trouble.

PHOSPHORUS—3x-6x-12x.

Lesions.—Any type, with a tendency to ulceration, crust formation and scaling. The lesions are of a dry character.

Locations.—No special site of predilection.

Sensations.—Itching, burning, gnawing, smarting and stinging.

Worse.—In the morning, until midnight, odors, weather change.

Better.—Right side, rubbing, cold food.

Associated Conditions.—The patient is of a haemorrhagic or tubercular diathesis, and may have some gastric, genito-urinary or some inflammatory symptoms.

SEPIA—12x-30x.

Lesions.—Macular, papular, vesicular and pustular, which may go on to ulceration, which later on may become malignant. The lesions primarily may be dry and scaly, but soon exudate and give off a very profuse and offensive discharge, and may again later become dry and scaly. The vesicles are situated on an inflammatory base. The lesions have a tendency to become circinate in outline. The skin is usually discolored and has brownish spots upon it. A saddle-like discoloration over the bridge of the nose and cheeks is quite typical. The patient is usually dark complexioned.

Locations.—Face, vertex, occiput, bends of joints, back of the ears, arms, hands, genitals, anus, hairy parts of the body, and lower limbs.

Sensations.—Itching, burning, soreness, and shooting or darting sensations associated with great sensitiveness.

Worse.—In the morning, evening, after eating, before menses, sweating, pregnancy, open air and cold.

Better.—Warmth, warm room, warm applications, violent exercise and light touch.

Associated Conditions.—Female troubles, hepatic derangements, sexual abuse and genito-urinary troubles.

SILICEA—3x-6x-30x.

Lesions.—Macular, papular, pustular, vesicular, vesiculopustular, erythematous and crusted lesions, with a profuse and offensive exudate, tending to form ulcers and crusts which are also very offensive. There is a marked tendency of all lesions towards suppuration. There is a tendency to scaling. Ulcers may in time become malignant.

Locations.—Scalp, back of the ears, arms, face, anus and lower limbs.

Sensations.—Itching, burning, boring, shooting, crawling, smarting, stinging and bruised feelings with crawling sensations in unaffected areas.

Worse.—Scratching, in the morning, cold, pressure and alcoholic drinks, especially wine.

Better.—From warmth, in warm room and wrapping up (Allen).

Associated Conditions.—Tubercular diathesis, paleness of skin and emaciation, enlarged glands, profuse menses or some other female disorder; copious and putrid sweat or some nervous trouble. Chronicity.

TUBERCULINUM—30X-200cm. (Raue).

Lesions.—Any type of lesion may form a generalized eruption over the body; may be associated with tubercular types of lesions containing pus of a greenish color; the skin is fiery red and there is much rawness.

Locations.—General.

Sensations.—Soreness in skin folds and intense itching.

Worse.—At night and undressing.

Associated Conditions.—Patient is either tubercular or has a tubercular diathesis, melancholic, sad, and is very susceptible to colds.

SOME SHEET ANCHOR REMEDIES IN CHILDREN'S DISEASES.

BY

W. J. BLACKBURN, M.D., DAYTON, OHIO.

(Read before Homœopathic Medical Society of Ohio, Columbus, O., May 11, 12, 1914.)

We are sometimes prone to give the greater part of the program at our Medical Societies to various subjects outside of *Materia Medica*. And yet *Materia Medica* is the bulwark of our school. Were it not for our system of therapeutics, we would not be meeting here to-day as The Homœopathic Medical Society of Ohio. The young homœopathic physician in a new location can find no surer and quicker way of establishing the nucleus of a future lucrative practice than by making a hit in treating the various children's diseases. The manner in which our remedies are prepared—their pleasant taste, etc., appeal at

once to the children. If the remedy used is effective, it also wins the parent, for you have combined pleasantness with results.

The remedies to which I shall call your attention in this paper are not new to you. No doubt all of you have used them many times. And yet perhaps some of you may have gone after strange gods in your effort to make yourself believe you must use something "new" in order to be "up to date." Remember, however, people are looking for results. They want you to cure their sick friends or loved ones. If you do this, you will be considered "up to date." If you fail, you will not be so considered no matter what new fangled method you may use.

I believe the *properly selected* homoeopathic remedy will cure. It's up to us to be able to select it.

If you were making up a list of remedies to be used in treating children, perhaps one of the first ones to enter your mind would be *Chamomilla*. In fact, it would be hard to successfully practice among the little ones without this drug. The potency does not matter so much just so it is not too low—say not below the sixth. I believe I heard Dr. Walton say when I was in college that he had bought a small bottle of *Chamomilla* 6th when he began practicing and that it had been replenished with alcohol only, when the contents became low until now he was unable to tell the potency but that it still continued to bring the desired results. *Chamomilla* brings to mind the sensitive child. There is a peculiar excitability about the nervous system characterized by an intense and morbid susceptibility to pain. The pain seems out of all proportion to the cause. This is because of the hypersensitiveness of the nervous system. The patient is cross, irritable, don't want to be touched or looked at—wants to be entertained or carried first by the father, then the mother or nurse. There must constantly be something done for the *Chamomilla* child. It is a remedy frequently indicated during the teething period. The cutting of the teeth seems to have put the child's nerves "on edge." He may bite, kick, scream or yell, or he may whine. He wants everything but accepts nothing. Starts during sleep, muscles twitch. One cheek red, other pale. A peculiarity of *Chamomilla* is it usually affects one side. The abdomen is much distended, due to fermentation. The colic is intense; stools of white mucus, or like chopped eggs or spinach, with

an odor of last year's eggs. There is an intolerance of pain. Aggravation from warmth at night. Chamomilla if prescribed upon its proper indications, will seldom disappoint you and will usually make you a friend of the family because you cured their baby when it was "awful sick."

Some night the parents are awakened by a sound that is more startling than the firebell. Everybody is excited. What's the matter? Burglars in the house? No; Jimmy has the croup—get the Doctor quick. Perhaps they can't get the family doctor and they call in that young homoeopath who has recently located in the neighborhood. He goes. Four remedies will usually be sufficient for him to select from. Aconite, Spongia, Ipec. or Hepar Sulphur. If it should be membranous croup, Kali Bichromicum or Anti-toxin. But the case of ordinary croup will be relieved quickly with one of the four remedies first mentioned. Antimonium Tart. is another remedy which may be indicated. I have seldom been disappointed in promptly relieving croup with the remedies above mentioned. Some time ago a physician of the dominant school said to me: "Do you know, Doctor, I have 'discovered' a new remedy for croup? Recently I had a case to which I wanted to give Ipecac to make the child vomit, but found only a few drops in my case vial. I put the amount in one-half glass water and gave teaspoonful doses at short intervals and to my surprise the child was promptly relieved." "Well," I said, "I am glad you have 'arrived.' You have been a long time on the way, but thank God you are here. The homoeopaths made this same discovery 100 years ago and have been reaping the benefits ever since."

Summer Diarrheas in children are often a source of much worry to the Doctor. Especially if they assume the more serious type as Cholera Infantum, etc. I believe the homoeopath is better fitted to treat these cases than the dominant school and is not liable to do harm, for oftentimes much harm is done by the use of opiates in the treatment of this trouble.

In reading a medical book recently by a prominent allopathic physician I ran across this statement which I quote. Speaking of the treatment of Summer Complaint in children he said: "Our homoeopathic brethren treat these cases successfully even after failure of the approved antiseptic methods, by the employment of Calcarea Carb. a complete cure being often effected in 24 to 48 hours." Of course, he needs to learn that

there are many other remedies besides Calc. Carb. such as Bell. Merc. Ipec., Puls., Ars., Mag. Carb., Mag. Phos., Cham. and others. In the treatment of *Cholera Infantum*, we should bear in mind remedies that affect the brain and nervous centers rather than the gastro-intestinal canal alone. As Bell., Gels., Verat. Alb., Helleb. Arsen., Phosp., etc., and occasionally Aethusa, Elaterium, Phosph., Croton Tig., etc. The above list will usually be sufficient from which to choose.

In *Pneumonia* of children, the homœopath is again well equipped. This most serious ailment which prominent authors in the regular school say is self limited and that medication is useless—generally yields nicely to the well selected remedy. Such remedies as Verat. Vir., Acon., Bry., Phos., Ant. Tart., Hepar Sulph. and Sang. will work wonders and save your patient.

In *Cerebro Spinal Meningitis*. If your case is diagnosed early and the proper remedy given you will seldom have to resort to the so-called "up to date" methods. With Bell., Bry. and Gelse. in the lead and Cup. Ars., Cicuta, Helleborus. Hyoscy. and Glon. as reinforcements, the battle should be won so far as internal medication is concerned.

In *Typhoid Fever*. Stick close to your homœopathic armamentarium and you'll win in the great majority of cases. Verat. Vir., Bell., Bry. Gel., Bap. Arsen., Phosp., Tereb., Nitric Acid, and Rhus Tox will see nearly all the cases through.

Diphtheria. You say you give Anti-toxin *at once*. Yes, if you don't and the child dies, you will be severely criticised because you used antiquated remedies. But *this* does not cure them *all* either. I am convinced that it is the most overrated remedy used to-day. I am convinced that many cures of diphtheria are recorded to its credit which are only ordinary cases of tonsillitis. Do I use it? Yes. One is almost compelled to use it—and yet I am not condemning it, for I believe it is one of our best remedies and that it acts on the homœopathic principle, but it is not indicated in *all* cases any more than *Lachesis* is indicated in all cases.

Don't forget Kali. Bich., Merc. Cyn., Merc. Proto., Iod., Crotalus, Lachesis, Baptisia and Arsenicum in these cases. They *do* cure as well as Anti-toxin.

Now brethren, I might go on almost indefinitely speaking of various diseases and the homœopathic remedies indicated

most frequently. The chairman of this bureau told me to make my paper short. So I have probably displeased him already.

The remedies I have mentioned are only *leading* ones. Many others will be called for frequently. But the ones mentioned will usually see your patient safely through his illness.

It has not been the intention to intimate that the remedies herein mentioned are *all* that is needed to cure the patient. No system of therapeutics will be successful unless combined with proper diet and hygiene, correct nursing and backed up by a physician who has good common horse sense. This combination will accomplish more for the sick than all the fads and "mushroom" remedies in existence. Am I right?

DRY HOT AIR TREATMENTS.

BY

J. A. BURNETT, M.D., HARTSHORNE, OKLA.

In order to give the dry hot air treatments, an apparatus made for this purpose must be had. The clothes from the parts to be treated are first removed and then the patient wrapped in Turkish towels which absorb the moisture and prevent burning. The hot air apparatus is not portable, hence patients must come to the physician's office for treatment. The hot air apparatus is not adopted in general practice on account of the time required to give the treatments. One hour in the apparatus is the average time for a treatment besides the time required to prepare the patient and the after treatment. The hot air apparatus is of special value to the physician that devotes special attention to office practice and chronic diseases.

Some physicians condemn the dry hot air treatment because they do not know anything about it; others condemn it because they do not have a hot air apparatus and do not want patients to go to a physician that does have one; and still others condemn it because they are too lazy to give the treatments. It requires work and time to give a hot air treatment and no lazy physician or poorly paid physician can do such practice. The public should bear in mind that cheap treatment is similar to other cheap things and is of but little value. Getting some-

thing for nothing is a thing of the past. The best treatment is none too good for any disease and even the best treatment often fails in many cases. The general public should be better informed on the importance of early treatment in any and all diseases, and the necessity of it being continued as long as needed. As a rule consumptives will delay treatment until the lungs are about gone; those with cancer will delay treatment until they are about eaten up and the rheumatics delay until the joints are grown together and then come to a physician and want a cure at once.

Early treatment not only saves the patient loss of time and much suffering, but places his case in the hands of the physician in time to effect a cure. I have known of many cases of rheumatism that would lose a year's work rather than pay one month's salary for treatment and be cured in a month or so or in less than a month. Such patients should know of the value of the hot air treatment and if they did they would go a thousand miles for such treatment, if they did not know of a physician closer that had a hot air apparatus. In all chronic diseases the difference in loss of time will more than pay for the treatment, besides save suffering and get the disease cured when in a curable stage. The physical or non-drug and non-surgical methods of treatment are rapidly growing in favor with all thinking physicians as well as with the intelligent layman. Dr. C. E. Skinner in his book "Therapeutics of Dry Hot Air," Second Edition, says:

"For several years past the writer has felt that new forces were coming to the front in the therapeutic world, that were destined in a few years to revolutionize the current methods of treating many disease processes and to greatly increase the inherent efficiency of others; we refer to the so-called 'physiological' forces; heat, cold, electricity and various other forms of radiant energy, etc. The first edition of this book was written for the purpose of bringing before the profession one of those forces which the writer's experience had convinced him was destined to become one of the foremost in therapeutical importance and utility, and which was known and understood by but a very small number of medical men."

I would like the reader to notice that Dr. Skinner placed the dry hot air treatment the foremost in therapeutical importance and utility of the various physical methods of treatment. It is now very well admitted that all physicians do not

know all things as the laity often think. Notice that Skinner draws attention to the fact that the dry hot air treatment is known and understood by but very few medical men. All physicians do not get the same results from the dry hot air treatment. If one physician has obtained real good results another may get very poor or no results from its use. The main reason for this is knowing when it is and is not indicated, the technique of the treatments and the proper kind of apparatus to use. When on this subject, Skinner says: "Many failures to secure satisfactory results with dry hot air have been due to the fact that it has been called upon to influence pathological conditions which were not amenable to its physiological action; others more numerous still have been due to faulty technique of its administration."

Each individual case requires the personal judgment of the physician in order to get the best or satisfactory results. As the length of the treatments varies from fifteen minutes to one and one-half hours and the frequency of the treatments from twice a day to once a week and the temperature employed from 200° to 500° F., there can be no fixed rules or directions for the treatments, hence any one can readily see that the success in the treatments depends very much on the judgment of the physician giving them, or in other words, the results depend to a great extent on the technique.

Skinner says: "It is not to be expected that every general practitioner will or can become a dry hot air expert, but every physician should at least understand the principles of its application and the clinical results derivable therefrom, in order that he may be able to decide intelligently when his patient will be benefitted by its use. If he does not care to undertake its actual administration he can send his patient to some one who is an expert."

Dry hot air treatment has a wide range of usefulness in the treatment of various diseased conditions. It is not a "cure all" and is not used in all diseases by any means. When it is employed, it is generally used in connection with other forms of treatment which may be needed. In speaking on this topic, Skinner says: "It is simply a rational therapeutic element which alone or in combination with other remedial agents will greatly increase our power to overcome pathological processes." The dry hot air treatment is almost specific for all kinds of rheumatism, many joint troubles, old leg ulcers and

various other conditions too numerous to mention. To make a long story short, dry hot air is indicated in all conditions where heat is indicated. Dry hot air has a wider range than moist heat; it completely supplants moist heat. The dry hot air treatment has no relation to vapor bath, etc. The Turkish baths, hot spring baths, and all other forms of moist baths are far inferior to the dry hot air bath or treatment. About 140° to 170° F. is as hot as moist heat can be tolerated, when with a hot air apparatus dry heat can be applied up to 500° F., which is nearly three times as hot as moist heat can be tolerated and twice the boiling point of water.

UTERINE HEMORRHAGE.

BY

W. C. MERCER, M. D., PHILADELPHIA.

THIS is a subject that can be elaborated upon to a considerable extent, and I am going to review the various causes and then illustrate by a few cases with which I have come in contact, simply to remind the general practitioner of the importance of investigating thoroughly the cause of an abnormal menstrual flow or one that takes place after menstruation ceases, and to impress the importance of the same upon his patients. This is especially so, near the menopause, and I have heard the expression many times, "Oh! it is only the change of life, and it must be so, it will come around all right." Such patients should be examined abdominally and vaginally to see if you can find a cause on the cervix or uterus; and if they are normal and the bleeding persists after careful homœopathic prescribing then you should insist on her having a curettment. The scrapings should be examined by the pathologist and you want a good one. The female passes through a menstrual epoch which begins with normal menstrual periods from the age of twelve to sixteen years and continuing to the menopause, which varies from forty to fifty years of age, some extending beyond this time. This flow occurs every twenty-one to twenty-eight days. The character, amount and length of flow is an idiosyncrasy of the individual. Bleeding occurring at any other time than this should be investigated. The bleeding

may come from the cervix or from the uterus. In going over the causes we will take up the simpler ones first. Displacement being a cause which increases the congestion of the uterus; inflammation of cervix or uterus, as endocervicitis and endometritis due to infection; ulceration of cervix; and it may be due to injury of some kind. Nervousness is given by some authorities. Increase in the cavity of the uterus with a fibrous condition of the vessel walls. Sub-involution can be given a place here along with a relaxed cavity and walls. Some constitutional diseases, as syphilis, anaemia, hemophilia, etc. In pregnancy you can have various conditions causing hemorrhage,—inflammation of the decidua and chorionic villi, chorio-epithelioma, hydatid mole; abortion, threatened, inevitable and incomplete; ectopic pregnancy, of course, the danger here is from loss of blood by rupture. Placental polyp will cause severe hemorrhage occurring after the patient is up and around. I can recall three or four cases of this kind which have come under my observation. Uterine tumors cause bleeding frequently, a mucous polyp of cervix and uterus. I have seen them so long as to protrude from the vulva and called prolapsus by the family physician. Fibroid polyp both of cervix and uterus, these you see in sizes varying from plum seeds to nine months pregnancy. Myomata of uterus near the mucous surface is a cause. Sarcoma also will cause it but here you have the danger of malignancy as well, under this section comes carcinoma, both of cervix and cavity of uterus. This many times gets beyond remedy before it is recognized; under this I would put a vaginal discharge. This is the danger zone, and occurs most frequently near the menopause and with some in this condition the bleeding comes on later, then it may have existed too long, if it is cervical. When it is from the cavity of the uterus or near the internal os the symptom is bleeding only. This may be at the time of menstruating but more profuse, later it will be between the periods. When it occurs after menstruation has ceased then you must be suspicious and investigate thoroughly, and do not allow the patient to put you off. Now is the appointed time.

Miss D.; age forty-five; never pregnant; began with irregular bleeding which medicine did not relieve but she was not examined, later she was annoyed by something protruding from vagina. She called her physician and upon examination he found she had a prolapsus of the uterus. He treated her for

nearly a year with no benefit. Then she came to see me, and upon examination I found a cervical polyp that was long enough to protrude from the vulva. The uterus was in normal position. The polyp was removed and patient cured.

Mrs. L.; age thirty-eight; two children; some years back began with profuse menstrual periods, later had bleeding between periods. She was treated for six months by her physician, but with no result. On examination, cervix normal but body enlarged. I curetted her and had scrapings examined with report of endometritis interstitial, not malignant; later she had a hysterectomy done, with good results.

Mrs. M.; age forty; profuse hemorrhage both at time of menstrual flow and between times, uterus slightly larger than normal. Curettment showed no signs of malignancy nor could the pathologist find any, and to this time the patient has remained well.

Mrs. W.; age sixty-two; several children; had ceased menstruating for ten years, then began bleeding and kept it up off and on for over three years. She said her mother did the same thing and lived to be eighty years old. After some time she visited her family physician who said he would cure her, but at the end of a year it was worse than before. She then consulted a homœopath and through him we curetted her; cervix normal, body large, pathologist reported malignant adenoma of uterus. Hysterectomy, fine recovery and well to-day.

Mrs. K.; age fifty-three; mother of eleven children, began by an attack of catarrhal jaundice from which she recovered. A few months after this she noticed her periods were more profuse and this increased in quantity, but not in duration. She visited her family physician and received medicine. She continued under his treatment for several months without improvement, in fact she was getting worse. I found her very weak, and upon examination found a normal cervix, uterus in good position and very little enlarged. Advised curettment so as to examine scrapings. Pathologist reported malignancy at internal os. Hysterectomy, fine recovery and well to-day. It is five years since she was operated.

Mrs. K.; age thirty-eight; one child; began with serous discharge which she had for six months, then some blood for a few months, and upon examination found a large carcinoma of cervix that had extended to the vaginal wall so far that I could do nothing but curette and cauterize which seemed to

stop its growth for a time and she held her own well. Six months later I curetted her again. Some time after this she died of cerebral hemorrhage.

In conclusion I want to bring out this one fact that it is the duty of every physician to his patient and himself that all abnormal discharges or bleeding from the vagina be investigated to the end.

The end,—to find the cause, the result—to save suffering and extend life and not to extend his pocket book.

Give the patient a chance for her life, and it is your duty to assist her.

SOME HINTS ON CHRONIC SUPPURATIVE OTITIS MEDIA.

BY

GEORGE JAMES ALEXANDER, M.D., PHILADELPHIA.

WHEN invited to read a paper before your Society, I was reminded that the audience would be one of general practitioners, and, while the choosing of the subject was left to me, it was requested that it be one from which such a body of men might take with them the greatest number of useful points.

Knowing that within the past year Dr. George W. Mackenzie has read a very able and instructive paper before you on the subject of acute suppurative otitis media, I concluded that it might be as well for us to review some of the more important points concerning Chronic Middle Ear Suppuration.

The subject is such an exhaustive one that I can only hope, in the limits of a paper, to emphasize the features most important in diagnosing and treating this disease; while it is not particularly difficult to diagnose its presence, it often requires a thorough knowledge, and exercising of good judgment to decide upon the exact pathological conditions and their locations, which decide our mode of treatment and the results to be expected.

In order to facilitate our study, let me briefly review the *Anatomy* of the temporal bone and middle ear, with these specimens and drawings.

The tympanic cavity is an air containing space, which, normally, by means of the eustachean tube maintains an air pres-

sure equal to that of the external meatus. It is divided into *three* parts: *superior*, or attic; *middle*, which includes the promontory of the median wall, and the tympanic membrane as the outer. And the *inferior*, which takes in the sulcus tympanicus and the floor of the tympanum. It is bounded *posteriorly*, by the facial nerve and antrum; *anteriorly*, by the eustachean tube and carotid artery; *inferiorly*, by the jugular bulb, and *superiorly* by the middle fossa. On its inner wall is situated the oval window, promontory and round window, and suspended in its cavity we have a chain of ossicles known as the malleus, incus and stapes; which conduct sound waves from the external to the internal ear. The malleus is situated in the tympanic membrane, the stapes sits in the oval window, and the incus completes the chain by articulation with the malleus in front and the stapes behind.

The Membrana Tympani is a concave membrane situated at the internal extremity of the osseus meatus, which is the inner portion of the external meatus. Extending from above downward and slightly backward in its center, is the malleus. In the upper one-sixth of the membrane, is a thickened portion known as the *superior fold*, on the lower margin and in the center of which, is the *short process* of the malleus; a very important land mark in making an otologic examination.

Chronic purulent inflammation of the middle ear is one of the most important diseases of the organ of hearing; on account of its frequent occurrence, the disturbances of hearing caused by it, and because of the general disturbances of nutrition that often develop during its presence.

The seriousness of *Chronic Middle Ear Suppuration* is increased by the involvement of the entire tympanic cavity, and complications which may arise in its course, by extension of the suppuration to the sinuses, cranial cavity, labyrinth and the external meatus.

In no form of inflammation of the middle ear does the hearing apparatus undergo such extensive changes as in chronic suppuration (*Politzer*).

Since this paper is intended to deal with the *symptoms, diagnosis and treatment*, I will not go into the minutia of the etiology and pathology, only enough to mention some of the more essential facts.

The most important *pathological* changes found in the mucous membrane, consists of *general thickening*, which is

due to a marked round cell infiltration and the dilation of new-formed blood vessels. The subepithelial layer of the mucous membrane becomes so compressed by the pressure of the round cell infiltration that it is replaced by a suppurating granulating surface; while the periostial layer of the mucous membrane is pathologically altered, it offers great resistance and may remain intact as long as two years. When it finally gives way, the nutrition to the outer plate of the underlying bone is cut off and caries and necrosis follow, often extending into the sigmoid sinus, jugular bulb and dura mater, resulting in extra-tympanic complications.

The cause of this disease is not the result of acute suppurative Otitis Media as often as is generally accredited, but frequently makes its appearance without any reactive phenomena, as in certain forms of cachexia, i. e., marasmus, anemia, lymphatic diathesis, tuberculosis and syphilis. Those that develop from acute infectious diseases and pass most frequently into chronic middle ear suppuration, are those arising during measles, scarlet fever, diphtheria and influenza; more rarely typhoid fever. Of these, the writer places *measles* first in importance, because of its prevalence, and the frequency with which this disease is accompanied or followed by *running ears*; and to the insignificance with which it is looked upon by the laity; thus allowing a chronic otorrhoea to become established before they seek advice; not so much on account of the discharge, as the associated deafness, which will be discussed later.

The *Chronicity* of this disease is also greatly influenced by poor nutrition and the unfavorable surroundings of the poorer classes. Other causes, mechanical in character, are those springing from the upper respiratory tract. For instance, nasal obstruction due to a deflected septum, polypi, hypertrophied turbinates, hypertrophied or diseased tonsils and adenoids. All these and especially the *adenoids*, acting as an intermediary in transmitting diseased processes from the nose, throat and pharynx, to the pharyngeal orifice of the eustachean tube and from thence to the middle ear.

While it is not original with me, I would like to go on record as saying that, of all the causes of chronic suppurative otitis media, *adenoids* is the most important, because it occurs more frequently from this than any other source. Dr. Mackenzie was the first to call my attention to this fact during

the days of my earlier experience, since which time I have been able to verify it.

The question arises, when is a case a *chronic* one? This is very important because of its relation to treatment. According to Alexander's classification, all cases with a discharge from the middle ear lasting one year and over, are chronic.

The *symptoms* vary with the intensity of the infection, the resistance of the patient, and the location of the pathologic process. In some instances the symptoms are so mild as to give the patient but slight annoyance, this is characteristic of the *latent* form. The patient will say there has been no discharge for many months or even years; yet the otologic examination reveals a small amount of pus, which evaporates or dries, and is thrown off with the cerumen. On the other hand, in the chronic *discharging* form we can have a profuse flow of pus, pain, rise of temperature 101° to 104° F., headache, lassitude and mental irritation, during acute exacerbations. Climatic changes have a marked influence upon this disease; all symptoms are aggravated by cold and damp weather.

Inasmuch as the discharge of pus and the pain are more or less coincident we shall speak of them together. The *secretion* may be constant or intermittent and usually has an offensive odor. This is due to several causes. For instance, putrefaction of epithelial masses, which have been piled up and undergone decomposition, necrosis of bone and caries, and cholesteatoma, each of which is distinguished by its characteristic odor. The quantity, character and consistency of the pus also has an important relation, as to the disease, the kind of tissue affected, and the location from which it is coming. For example:

(A) A moderate amount of thin transparent discharge suggests tuberculosis.

(B) A thick superabundant discharge suggests that suppuration has invaded the mastoid region.

(C) It is often intermittent as a result of stricture of the external canal, small perforation in the drum membrane, and location of the perforation, inspissated masses in front of the perforation cholesteatoma and acute exacerbations.

(D) A bloody discharge speaks for granulations, with possible bone involvement.

(E) A thin ichorous, dark colored, gritty, offensive (cadaveric) odor, suggests long necrosis.

Pain when present, is of varying intensity, due to all the causes mentioned under intermittent discharge, etc.; and may be referred to the mastoid region, or head, depending upon the complication present. Ordinarily, relief of the pain follows the removal of the obstruction and cessation of the flow of pus. Occasionally, however, the reverse is found to be true. Pain and feeling of pressure in the head arises, which does not disappear until the discharge from the middle ear returns. *Fever* may be present in a slight or marked degree depending upon the area of involvement, degree of retention and severity of exacerbations.

Subjective Noises (Tinnitus) are much more rarely met with in this disease than in the non-perforative catarrhs, because of the equalization of the air pressure between the external atmosphere and the tympanic cavity, and the labyrinth is less often involved in the non-complicated forms of chronic middle ear suppuration.

Giddiness, unsteadiness of gait, and marked attacks of vertigo are indicative of temporary changes in the labyrinth, (cholesteatoma) while persistent *headache* in the temporal region, occiput, or vertex, should cause one to suspect cerebral complications.

The power of *hearing* varies greatly during the course of middle ear suppuration. Such a fluctuation may be attributed to a number of causes, such as variation in the swelling of the mucous membrane, the quantity of secretion in the middle ear, recurrent inflammations, intercurrent naso-pharyngeal catarrhs, and such systemic diseases as marasmus and syphilis. Warm and dry weather have a favorable influence, while the effects of cold wet weather are the opposite.

A marked decrease in the hearing distance takes place in an extensive hypertrophy of the mucous membrane, enclosing the ossicles, and an advanced labyrinth involvement, either inflammatory or atrophic, the latter the result of only partial use of the inner ear (acoustic labyrinth) during a long and severe suppurative process in the middle ear. The writer has a case of this type at the present time, who hears the conversational voice at one-half meter with the right ear and one meter with the left ear; there is a sharp decrease in the high tones, and while the bone conduction is lengthened, it

is not lengthened in proportion to the shortening of the air conduction.

If the hearing is only diminished by intense swelling of the mucous membrane and secretion, it will return to normal, or nearly so, after the swelling and secretion subsides. On the contrary, if permanent, pathological changes remain, such as adhesions, succulent or cicatricial tissue, in the region of the round or oval windows, causing a fixation of the stapes, only a slight improvement in hearing will be noticed on cessation of the discharge. It sometimes happens that a striking change for the worse follows the cessation of the secretion, which only disappears with the reappearance of the pus, because the secretion has moistened the previously dry and firm connective tissue, causing it to become relaxed, giving the ossicles greater mobility.

We may have entire restoration of hearing, or complete deafness following middle ear suppuration, slight disturbances of hearing which follow exhausted middle ear suppurations often remain stationary for many years, while there is a striking increase in the deafness in the aged, and in cachectic individuals.

Now let us consider that feature of the otoscopic findings which pertains to the size and location of the *perforation* in the *tympanic membrane*, which soon gives way to necrosis, resulting in a perforation varying in *size* from that of a pin-head to complete loss of the membrane or they may also be *multiple*.

The *location* of the perforation affords a reliable aid to us in estimating the area, and tissues affected in and around the tympanic cavity (for this the credit must go to Lentert and Zanfai).

For example:—

(A) A *centrally* situated perforation sometimes signifies inadequate drainage through the eustachian tube, and is rarely attended by necrosis of the bony walls or the ossicles, the result of constant infection through the eustachian tube, and the perforation is invariably located over the orifice of the tube, or at a point of least resistance.

(B) A perforation of the *inferior margin* of the drum membrane, speaks for necrosis of the floor (wall) of the tympanic cavity. The bony wall here separating the tympanic cavity from the jugular bulb is usually quite thick, but on

rare instances it is very thin so that we must think of a possible involvement of this vital organ.

(C) A perforation of *Shrapnell's Membrane* (membrana flacida) immediately above the short process of the malleus, usually indicates necrosis of the head of the malleus.

(D) A *Marginal* perforation just above the short process extending to the superior wall of the meatus, usually signifies necrosis of the tegmen tympani (roof of the attic) according to Ballinger. Personally, I am inclined to feel that such a fine distinction can seldom be made.

(E) A perforation of the membrana tympani at the margin of its *posterior superior quadrant*, generally indicates a necrosis of the incus or bony wall of the antrum.

(F) *Multiple* perforations are not common; their presence is the result of traumatism, tuberculosis and scarlet fever, and may be located almost any place on the membrane.

In summing up then, it may be said that the central perforations signify a simple infectious process of the mucous membrane and a marginal perforation indicates bone necrosis, the latter being the more serious, and when we have *entire absence* of the membrana tympani it is strongly indicative of bone necrosis.

Before leaving the drum membrane it must not be forgotten that a *chronic* perforation has a smooth, even and round edge, which is the result of having become epidermized.

The difference of opinion in the *treatment* of chronic suppurative otitis media, particularly *operative*, are very numerous; however, it is plain that this must be carried out according to the pathological changes present. For this purpose, the cases should be divided into two classes, *uncomplicated* and *complicated*, nevertheless it should be understood that every case is to be treated conservatively, where there are no complications calling for immediate operative interference. While the results are not very encouraging in most instances, there are times when the discharge can be stopped, and the disease overcome; but this is problematic, for everything may appear normal and remain so for months or years, when there is a recurrence, because a portion of the diseased process remained hidden or walled off.

The *Dry Treatment* is usually best adapted for the treatment of the cases where only the mucous membrane is involved, which means that the tympanum is kept dry and antiseptic by

the use of the Politzer bag; and by using plain or medicated gauze in the external canal, placing it lightly against the diseased tissue in the tympanum. *Cotton* should never be used because of its poor absorbent qualities. Some of the medicaments used are boric acid, burrow's fluid, aristol and bichloride. The gauze should be changed once or twice every twenty-four hours.

In the complicated cases where we have caries and necrosis in the tympanic walls, we may use the method of *lavage* to better advantage by syringing into the middle ear antiseptic solutions. Not only is the antiseptic solution the best method of treatment to pursue, but in some cases the secretion is so thick and tenacious, and the masses of cast-off material will be so great as to be an impediment to drainage and cause *earache* by pressure.

Lavage indiscreetly used, in the hands of the not especially trained physician, sometimes results in quite startling and perplexing symptoms. For example, pain, dizziness and collapse. As a result of too great pressure against the labyrinthine windows, fistula in a semi-circular canal, and the use of water too hot or too cold, which should be 100° F., or as near the body temperature as possible. Another danger in the syringing method is of setting up an acute exacerbation. Some of the antiseptics used are lysol, bichloride, peroxide of hydrogen, potassium permanganate, formalin, etc. After all irrigation, the parts should be perfectly dried out by the use of the Politzer bag, and cotton tampons, and a piece of plain sterile gauze placed in the external canal. The *Caustic* treatment had better not be attempted by the inexperienced. Same can be said of *Paracentesis*, which is seldom indicated in these cases.

My experience with the *Vaccines* has all been post-operative and so limited that I am not prepared to express an opinion at this writing.

This brings us to a point where we are confronted with two important questions. First:—When is operative interference indicated? Second:—Which operation is to be selected? In answer to the first question—

(1) A middle ear suppuration persisting in spite of regular conservative treatment for a year or over, or if the secretion should disappear and again reappear, it is almost sure to be an operative one.

(2) Persistent *foetid odor* characteristic of a bone necrosis and cholesteatoma (and they are both different).

(3) A thin *watery secretion* as previously described, indicates diseased bone.

(4) Presence of polyps in the tympanic cavity or external canal.

(5) Cholesteatoma.

(6) Involvement of the labyrinth which is indicated by diminution or loss of *hearing* and disturbance of *equilibrium*.

(7) Evidences of *Cerebral Complications* which are manifested by headache as before stated.

(8) Danger of *Facial Paralysis*.

It has been very aptly remarked that a person with a chronic suppurative otitis media, is constantly in a position as uncertain and dangerous as a man sitting in the center of a powder mill smoking a cigarette.

As for the *operative* procedures: There have been a number of so-called conservative operations devised, primarily for the purpose of conserving the hearing, the success of which has been indifferent, and in some instances practically nil, as to curing the disease, because of their uncertainty and insufficiency. Some of these are as follows:

(A) *Ossilectomy*. The removal of one or more of the ossicles for disease of these bones and the tegmen antri.

(B) *Antrotomy*, for the adoption of this operation there should be no diseased bone, and the morbid process confined to the mucous membrane.

(C) The *Yankauer* operation is sometimes used where the mucous membrane of the pre-tympanum is diseased as a result of Pyorrhoea of the eustachean tube. The object of this operation is to destroy the mucous membrane, and effect a permanent closure of the tube.

(D) *Meatomastoid Operation* (conservative radical). This was devised by Heath, who claims success for it, and applied by Ballinger and Bondy, with varying results. You can see the operation on this specimen which I have prepared. It is intended mainly for disease of the antrum and attic. It is started the same as a *simple acute mastoid* including the antrum and posterior wall of the osseous canal down to the anulus tympanicus. The drum membrane and the ossicles are left intact. I am not well enough impressed with this operation to use it in practice. We will lastly consider—

(E) *The Radical Mastoid.* This operation by the best authorities in which I concur, is the operation of choice. It is the most practical and is usually followed by cure of the disease. Alexander uses it exclusively. It was my privilege to assist him in his operations every day for more than a year, and I do not recall a single instance where he used a modification, in a purely chronic case, and he has done nearly four thousand of these operations. This operation is accomplished by going into the Mastoid process, removing the antrum, posterior wall of the bony meatus, including of the drum membrane and ossicles, and is concluded by a plastic operation on the membranous canal, for the purpose of constructing a new membranous canal to replace the *bony one* removed.

The *objection* to the radical operation is the occasional diminution of hearing. But as often we have an improvement. And we are able to thwart cerebral complications. To quote Welty, who said he can very enthusiastically say that the *Radical Mastoid Operation* has done more for suffering humanity than any single operation in the whole category of surgery, with less risk to the life of the patient.

I would not feel that this paper was properly concluded if I did not take advantage of the opportunity to thank the members of the West Jersey Homoeopathic Medical Society for the privilege of presenting this important subject to you.

REPORT OF THE DEAN OF HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA.

(Presented at the Annual Meeting of the Alumni Association, June 4th, 1914.)

Fellow Alumni of Hahnemann:

THE report of the Dean this year will not chronicle any extensive changes in either curriculum or equipment, or even, unfortunately, in endowment, although we have received several endowed scholarships which have added somewhat to our guaranteed income.

The work has rather been along the lines of perfecting the curriculum, making such minor changes as would increase its efficiency and of adding to the personnel of the teaching staff, in order to give each student more individual and thorough instruction. Thus, for example, instead of dividing the morn-

ing ward work between medicine and therapeutics, the entire mornings have been devoted to the former, while six afternoon hours were occupied by the same men, under the supervision of Dr. Paxson, in the study of the therapeutic aspects of the same cases. So too, the time spent in the outpatient department of medicine has been doubled and here the men receive a thorough drill in both diagnosis and prescribing under the supervision of Dr. Steele and his assistants. In connection with all the ward work the Hering Clinical Laboratory has more than ever demonstrated its value.

We have found no difficulty in meeting and exceeding the new requirements that each graduate must have attended at least six confinements, assisted at six or more major operations, administered anaesthesia at least six times and participated in as many or more autopsies. With the exception of confinements at the patients' homes, all this work is done under the immediate supervision of the teacher. The autopsy work has been somewhat hampered during the past session, owing to the scarcity of bodies furnished by the State Anatomical Board. In spite of this, with our small class, we were able to more than meet the above mentioned requirement. It is expected that this deficiency will be remedied next year and thus give our larger class sufficient material. This course, in the Junior year, is more than one in post-mortem examinations alone, but serves as an admirable adjunct to the anatomy of the two previous years, as well as to physical diagnosis and operative surgery, by its demonstrations of the topography and relations of the different viscera in the head, chest and abdomen.

Since the hospital interne year has become obligatory, we have deemed it wise to relieve the multiplicity of didactic studies in the third year, by moving into the final year some of those that appear to be better suited to more advanced students. Among these, I might mention, tropical diseases, immunity and serum therapy combined with pathological clinics, an increase in the lectures on therapeutics and medicine to two each week and a short, but thorough course on intelligent and scientific prescription writing which will fill a long felt want among the men we are sending out to practice medicine.

The obligatory interne year opens up new responsibilities for the hospitals which require the services of our graduates.

Every hospital becomes thereby a teaching institution and must instruct their residents and prepare them to successfully pass the State Board examinations, just as much as we do in their collegiate course. Not only must the attending staff exercise more diligence and care in supervising and criticising their work, but each hospital must equip itself with laboratory facilities sufficiently complete and up-to-date to enable these men to work out their problems and perfect themselves along these lines. It will then be, not so much the hospital that has the clinical material in greatest quantity, but the one that does the best teaching that will be in greatest demand among the men leaving college. We are already making arrangements with this end in view for our coming internes and are also ready to give a two weeks' review in the fundamentals toward the end of the year and shortly before the State Board Examinations; to this course all applicants for licenses to practice are invited and will be most welcome.

I have stated that in the matter of equipment, as well as curriculum, there have been no extensive changes and by this I mean that we have not installed any new laboratories, although we are sorely in need of one or more in connection with the premedical course, as well as one or two more all-time teachers for this same additional year. I might add, too, that we are beginning to feel the necessity for increased facilities in some of our present laboratories to accommodate our enlarging classes.

A great deal of work has been done to perfect our equipment by the preparation of microscopic sections in pathology, histology and embryology; by installing reflecto and projectoscopes with nearly 1,000 lantern slides; by the preparation of wet and dry and mounted Gaiserling specimens, in series representing every phase of each disease and accompanied by clinical, as well as pathological histories; of all the bones, of the joints in glycerine and of the viscera in fluid, to supply each student with the specimens discussed at a conference; of the varied apparatus and material needed in the laboratories of physiology, chemistry, pharmacology, pharmacy, histology, pathology and bacteriology; and, finally, by the employment of laboratory servants to do the immense amount of detail or routine work, more or less menial in character, which unnecessarily consumed so much of the time of our teachers.

A favorable sign of the times is the fact that more than one-third of our students own their own microscopes and that the proportion is increasing each year. We have furthermore acquired enough first class instruments to supply every man in college. A student buys his stand with an objective for histology in his first year; he adds an immersion lens the next year for bacteriological work and the year following completes his outfit by a mechanical stage for blood work. In this way the expense is spread over three years and he graduates with a complete microscopic equipment which will last him through life. The balance of the men have to pay a rental for their microscopes which enables us to replenish our stock and add to it for larger classes.

In the matter of larger classes there is certainly reason for encouragement. When the present graduating class entered college, we were only able to accept eighteen out of some seventy applications, as stated in my first report, on account of the suddenly increased requirements. The following year we began with between 20 and 25 and the next between 25 and 30. Last fall we had some 50 matriculates including 38 freshmen. Next fall our premedical class bids fair to largely outnumber our freshmen, but we have successfully carried out our *trial* premedical year and are ready to take care of these men as long as the Department of Public Instruction asks us to do so and approves of our work.

It is with especial pleasure that I refer to the teaching of the fundamentals, the work in the laboratories, in the college building proper. Hahnemann has always been noted for her clinical facilities and her clinical teaching, but the time has come when the fundamental instruction and the facilities for the same are fully equal to, if not superior to the former. This has been made possible by the development of our laboratories and equipment and especially by the acquisition of a corps of enthusiastic teachers who have given up practice to become "all-time" men, or who make sacrifices of valuable time for science and the institution, such men as Weaver, Sappington, Pearson, Widman, Muhly, Elliott, Wurtz, Bornemann, Leopold, Sylvis, Barthmaier, Hopp, Betts, Frosch, Nagle, Steinhilber, Clemmer and others.

Not only has the curriculum been carried out in quantity and quality as called for by our announcement and rosters,

but a large amount of experimental and research work has been done in almost every department.

I have with me detailed reports from the different laboratories, but fear that time will not permit me to read them to you. They are, however, at the disposal of any alumnus who desires to look them over.

As stated in my first report, "the College and Hospital have been absolutely amalgamated, so that no suspicion of a proprietary institution can ever be thought of hereafter. The finances and business management of the entire corporation are now in the hands of our Board of Trustees, the teaching staff confining their activities to the educational side alone, just as the Hospital and Dispensary staff concern themselves purely with the medical and surgical work of the institution."

Since that time we have all wished to find some means by which the Alumni could be brought into closer touch with the institution, could take a hand in its management and feel a greater interest in its success. The organization of auxiliary associations in Pittsburgh, Northeastern Pennsylvania, in Reading and vicinity and, more recently, I am told, in Schuylkill County, has been a move in the right direction and I believe a number of similar associations will soon be organized. But this did not solve the question in a complete and thoroughly satisfactory manner. Our Board of Trustees, according to our charter, consists of 25 members, 15 laymen and 10 medical men, five of the latter being members of the governing faculty. The remaining five are all alumni and three of them are not teachers: Drs. Korndoerfer, Middleton and Posey, and Drs. Campbell and Van Baun who organized this Alumni Association. The governing faculty, according to the by-laws, is made up of the heads of the different departments, although the question of changing the by-laws so as to materially increase the membership of the governing faculty is receiving serious consideration.

Last winter the Trustees went into this matter very thoroughly and studied the conditions in a number of our Universities and Colleges. They finally decided to adopt a plan similar to the one in vogue at Princeton and appointed a committee of local alumni, under the leadership of Dr. Ashcraft, to be known as the Graduate Council. This Council has power to increase its membership from the general or auxiliary alumni associations and to meet with the Trustees or Faculty,

or both, as they may deem advisable. In this way they can bring the general teaching corps and the Alumni Associations into closer touch with the governing bodies. Let us hope that the plan will be a success and that much good may come to Hahnemann through the Graduate Council.

Respectfully submitted,

WM. B. VAN LENNEP, *Dean*.

**EXAMINATION QUESTIONS—BUREAU OF MEDICAL EDUCATION AND
LICENSURE OF THE STATE OF PENNSYLVANIA—**

JUNE 1, 2, 3, 1914.

PHYSIOLOGY, PATHOLOGY AND BACTERIOLOGY.

1. Describe the lesions in typhoid fever. Outline the laboratory tests for verifying the diagnosis.

2. Describe the lesions, name the causes and outline the laboratory technique for demonstrating the varieties of inflammations of the eyes of the newborn.

3. Given a case of incipient tuberculosis of the lungs, outline the laboratory tests that would aid in confirming the diagnosis.

4. Given an acute case of peritonitis: (a) How are the toxins absorbed? (b) Discuss the rationale of the sitting position and enteroclysis in the treatment of the above condition.

5. Given a case of gonorrheal infection, describe the heart lesions that may result. Contrast the disturbed functions of such a heart with the functions of a normal heart.

6. Contrast the blood picture in leukemia and pernicious anemia with that of normal blood.

7. Describe the lesion in: (a) Gastric ulcer; (b) Carcinoma of the stomach. Differentiate these lesions by laboratory methods.

8. Differentiate, by an examination of the spinal fluid, the various forms of meningitis.

9. Name two pathologic conditions that usually have icterus as a symptom. What is the significance of icterus: (a) As regards the liver? (b) As regards digestion?

10. Briefly describe the types of gangrene. What is understood by the "line of demarcation"?

DIAGNOSIS, SYMPTOMATOLOGY, TOXICOLOGY AND
MEDICAL JURISPRUDENCE.

1. Describe the symptoms of the various forms of asthma, and differentiate them from chronic bronchitis.
2. State in detail the symptoms diagnostic of ileus, and name four conditions which may cause it.
3. Describe the symptoms of diphtheria and differentiate it from follicular tonsillitis.
4. State the symptoms of rubella (Roetheln) and differentiate it from measles, scarlet fever and urticaria.
5. Describe the symptoms diagnostic of gonorrhoeal arthritis, and differentiate it from tubercular joint.
6. State the symptoms of iritis and differentiate it from glaucoma and keratitis.
7. Differentiate aortic regurgitation from mitral regurgitation.
8. Enumerate the symptoms of a poisonous dose of: (a) Bichloride of mercury; (b) Aconite; (c) Arsenic. Give the immediate treatment for each one.
9. Upon what data would you base a diagnosis of: (a) Syphilis? (b) Tetanus? (c) Gonorrhoea? Name one laboratory test for each.
10. What precautions, from a medico-legal standpoint, should the physician or surgeon exercise when treating fractures or dislocations?

OBSTETRICS, GYNECOLOGY AND PHYSIOLOGICAL CHEMISTRY.

1. Enumerate the causes of backward displacement of the womb: (a) in nulliparae; (b) in multiparae. Discuss the treatment in each case with reasons for the same. (Omit description of operation.)
2. Give the methods of making an early diagnosis of cancer of the uterus: (a) Cervix; (b) Fundus. Outline an appropriate treatment for each. (Omit description of operation.)
3. Outline a satisfactory preparatory treatment for plastic operations on the vagina, giving reasons for each step.
4. Name four abdominal enlargements which may be mistaken for advanced pregnancy (seven months or more) and differentiate each from such possible pregnancy.
5. State the probable causes of vomiting of pregnancy.

What methods would you adopt for its relief and state the theory on which you would use the remedies advised.

6. Given a pregnant woman (the first three months) what symptoms would indicate a possible abortion? In case the abortion occurred, how would you treat the case? (Omit description of operation.)

7. Discuss the various toxemias of pregnancy from the view point of premonitory symptoms. Discuss their treatment: (a) Prophylactic; (b) After having become well established.

8. Give arguments for and against the so-called low protein food standard.

9. Explain the relationship between the pigment of the blood, bile and feces.

10. Explain the processes of physiological chemistry by which indican is ultimately eliminated and where is it ultimately found?

SURGERY AND ANATOMY.

1. State the avenues and possible points of metastasis of a malignant growth of the breast. Upon what symptoms may an early diagnosis of cancer of the breast be based?

2. State (a) What structures may be injured in a subcoracoid luxation of the humerus? (b) How may this condition be recognized? (c) How may it be corrected?

3. Name three usual causes of rectal strictures. Outline (without details) a palliative operation for this condition.

4. Enumerate (without explanations or details) conditions which might exist in a patient tending to complicate and render more dangerous a surgical operation.

5. What conditions would call for catheterization of the male bladder? Describe, in detail, a proper method.

6. Describe (a) A method of preventing surgical shock; (b) Its treatment.

7. In the case of an abdominal operation give in detail; (a) A method of preparing the patient; (b) The surgeon. Give reasons for each step.

8. Outline (a) Methods of prevention; (b) The treatment of bed sores.

9. In fractures of the upper third of the femur, what is the usual position of the fragments? What muscular action causes the same?

10. What anatomical structures are involved in flat foot?

What methods of treatment would you adopt for its correction?

PRACTICE AND THERAPEUTICS AND MATERIA MEDICA, HYGIENE
AND PREVENTIVE MEDICINE.

1. Describe the therapeutic action of suprarenal gland, thyroid gland, and pituitary body.
2. Outline the management of a case of syphilis in both the primary and tertiary stages.
3. Name two remedies and the indications for their use in each of the following conditions:
 - a—Impetigo contagiosa?
 - b—Scabies?
 - c—Tape worm?
 - d—Haemoptysis?
 - e—Croup (non-diphtheritic)?
4. Name and describe three methods for the purification of water intended for drinking purposes.
5. Upon what theories or principles are cold baths and cold sponging resorted to? State the indications calling for such measures.
6. Give in detail the dietetic and hygienic rules and regulations you would prescribe in a case of diabetes mellitus.
7. Outline the management of a case of nocturnal enuresis.
8. Explain the difference between the principles underlying vaccine therapy and serum therapy. State the character of danger in their application to the human body.
9. What errors in diet or hygiene or occupational conditions may cause or aggravate acute eczema? Write a prescription for a suitable application stating the special purposes expected to be accomplished. State one drug to be used internally, with the reasons for its employment.
10. Give the hygienic measures tending to prevent epidemic "colds." Give the management of an acute attack including three remedies and reasons for their use.

COMMONWEALTH OF PENNSYLVANIA—BUREAU OF MEDICAL EDUCATION AND LICENSURE—REPORT OF SUPERVISOR OF MIDWIFERY TO BUREAU OF MEDICAL EDUCATION, PHILADELPHIA DISTRICT, FOR JAN., FEB., MARCH, 1914.

Number of Women Delivered, 1699. (862 cases were inspected, while the balance, 837 cases, were not inspected.) It is to be noted therefore that the remainder of this report deals only with the inspected cases.

Mortality of Mother, one case. Babies, 27 cases.

Cause of Mortality—Mothers (shock, twin labor with hydramics.)

Babies—

Cerebral hemorrhage, two cases.

Face presentation, one case.

Breech presentation, two cases.

Foramen ovale patient, three cases.

Syphilis, three cases.

Transverse presentation, two cases.

Prematurity, seven cases.

Impaction shoulders, one case.

Cord around neck, one case.

Cord prolapsed, one case.

Ablatio placenta, one case.

Unknown, three cases.

Morbidity—Mothers, 62 cases. Babies, 8 cases.

Number of women delivered by midwives, 1647.

By physicians, 52.

Deliveries at term, 1689.

Deliveries before term, 10.

Number of women delivered at home, 1697.

At hospital, 2 cases.

Number of cases of dystocia, 32.

Varieties of dystocia.—

Placenta Previa, two cases.

Inertia uteri, three cases.

Face presentation, three cases.

Breech presentation, eight cases.

Occipito-Posterior, five cases.

Transverse presentation, three cases.

Non-rotation of occiput, five cases.

Impaction of shoulder, one case.

Adherent placenta, two cases.

Prolapse of cord, one case.

Unknown, three cases.

Number of cases showing laceration of perineum, 127.

Primiperae, 60. Multiperae, 67.

Number of cases repaired, 20.

Breast infections, three cases.

Ophthalmia neonatorum, two cases. "Sore eyes," 86 cases.

Number of women at present under care—Impossible to make any estimate as this class of patients does not as a rule regularly engage their attendant before the onset of labor.

In presenting this report the Chief of the Philadelphia District feels it important to call the attention of the Bureau to the fact that he is greatly hampered in one phase of the work by the refusal of the Philadelphia hospitals to admit ophthalmia neonatorum to their wards. The importance of this cannot be over estimated and it is earnestly hoped that some pressure may be brought to bear upon those hospitals which receive aid from the State of Pennsylvania.

We have licensed 181 women as midwives in the Philadelphia District. They may be divided into three classes: first, those women who received their training abroad and who are thoroughly competent (they comprise but a very small percentage of the whole); second, the women who have been in practice for a number of years, and who are anxious to learn. This section division is the largest of the three. Finally, the third class composed of a number of useless, ignorant and filthy women, upon whom any attempt at betterment is wasted. I estimate that this last class would comprise about twenty per cent of the whole number.

If the work of this sub-division of your Bureau is to be seriously carried on, there is an absolute necessity for the establishment of some means of instruction of women who desire to take up the work of the midwife. We are meeting the needs of the women who have received licenses from the Bureau since its establishment, by a regular series of lectures which are given by the Inspectors, but while there have been several applicants for a course in elementary midwifery, it has so far been impossible to make any arrangements for their instruc-

tion. The only adequate course is that given at Bellevue Hospital in New York City.

Respectfully submitted,

(Signed) WM. R. NICHOLSON, *Supervisor.*

1731 Pine Street.

Maternal morbidity—Causes :

Post partum hemorrhage, five cases.

Scarlet fever, one case.

Anaemia, three cases.

Caked breast, two cases.

Adherent placenta, one case.

Tuberculosis, two cases.

Syphilis, one case.

Sapremia, nineteen cases.

Urinary retention, one case.

Erysipelas, one case.

Phlebitis, one case.

Subinvolution uterus, two cases.

Cervical adenitis, one case.

Hemorrhoids, one case.

Constipation, two cases.

Starvation, one case.

Chorea, one case.

Septicaemia, three cases.

Hemiplegia, one case.

Valvular heart disease, three cases.

Varicose veins, one case.

Typhoid fever, one case.

Retained secundies, three cases.

Inertia uteri, one case.

Ablatio placenta, one case.

Fetal morbidity—Causes :

Jaundice, one case.

Spina bifida, two cases.

Phimosis, one case.

Prematurity, one case.

Pneumonia, one case.

Gastro-enteritis, one case.

Hydrocephalus, one case.

EDITORIAL

THE ATTITUDE OF THE PUBLIC TOWARD HOMŒOPATHY.

IN these days of doubt and pessimism among physicians, it is sometimes worth our while to look on the bright side of the picture, and if we do so, there are many signs that should cause the practitioner of homœopathy to take heart, put his shoulder to the wheel and to look forward to the future with hopefulness. There probably never has been a time when the public were more willing to listen to the advice of medical men than to-day. Each new advance or supposed advance, in medical science is hailed with popular enthusiasm and delight, and, the people as a whole are willing—perhaps at times too willing—to give credit to any one who can contribute anything of value to the art of healing. It is essential to bear this in mind, as many homœopathic physicians seem to have an idea that they are handicapped in their efforts because practitioners of homœopathy are not given a fair chance and that homœopathy does not get a fair hearing.

Outside of a very limited circle of medical men, these statements cannot be accepted as representing the true state of public opinion for it was demonstrated in the recent tour of Dr. Wilcox, President of the American Institute of Homœopathy, through ten States of the Middle West that Homœopathy is very popular among the laity and when properly placed before them is universally accorded a fair and enthusiastic reception. Their attitude is well expressed in the statement of a business man of Kansas City, who said to Dr. Wilcox: "Your cause is sound and the people willing; but you need a leader." The same idea was also expressed by a number of newspaper men who expressed the opinion that "the public believes in homœopathy just as much as it ever did; the only trouble is that it has not been presented to them

forcibly and frequently; your cause has suffered through silence and indifference, tell the public in forcible language what you are doing."

We do not know who these gentlemen were, but we believe they have hit the nail on the head.

Not only have homœopathic practitioners as individuals been indifferent and lacking in missionary zeal, but our societies have consumed long hours discussing matters that have ceased to be of vital importance for more than one hundred years, and have been as silent as the grave on the questions and problems that are facing the profession and the public in this day and generation.

With their own enthusiasm and loyalty waning, many homœopathic practitioners seem to feel that the cause has fallen into decay and that the methods and principles of homœopathy no longer are as effective as formerly. In all this they fail to see that the change has been in themselves and not in those fundamental laws and principles of drug action upon which homœopathy is founded.

Let us realize clearly the fact that the cause of homœopathy cannot fail because of the attacks and slanders of its enemies. If it fails at all, it must be because those who are assumed to be its supporters and adherents have laid down their arms and have ceased to preach and to practice those principles and methods which have placed homœopathy in the forefront of all systems of medical practice.

We cannot close this subject without paying a high tribute to the zeal and steadfastness of purpose, the logical reasoning and the untiring energy of Dr. DeWitt G. Wilcox. Fortunate, indeed, was the Institute in selecting such a man as the leader of the homœopathic profession and his earnest efforts for the advancement of homœopathy have placed every homœopathic practitioner in the United States under an obligation to him.

In closing, we would like to ask every reader to give thoughtful attention to the words with which he concludes a short editorial in the *New England Medical Gazette*: "Friends, the victory is ours, if we will be sufficiently energetic, optimistic, determined and united to go forward and take it. Come to Atlantic City to witness the step toward that end."

G. H. W.

THE ADVANTAGES OF THE SMALL MEDICAL COLLEGE.

THE report published by the Council of Education of the American Medical Association (*Journal of the A. M. A.*, May 23rd), seems to indicate very conclusively that the small medical school is distinctly advantageous over the larger institutions as far as imparting a practical medical education is concerned.

The report states that "the graduation of large classes by a medical college does not prove excellence of teaching, since several colleges having one hundred or more examined, have very high failure percentages and this holds good even for the graduates of 1913. In fact the larger the college from the point of view of the number of students and graduates, the more serious is inferior teaching ability indicated by a high failure percentage.

"In fairness to the medical student and in the interest of the public, such schools should gradually strengthen their teaching facilities or reduce the size of their classes."

The reasons for such a state of affairs are probably not hard to find if we review the catalogues of some of the large medical schools. In Pennsylvania, for example, we find that some institutions having five or six hundred students have a teaching staff that is hardly larger than that of schools containing over one or two hundred students.

In some instances, the number of beds in associated hospitals available for teaching purposes, are proportionately, from three to four times as great in the small institutions as compared to the larger ones. In fact, in some instances, there are but two or three beds per senior student available for clinical teaching.

It is being urged by those who are interested in the improvement of medical education, that many of our large medical institutions follow the example of the Rush Medical College and voluntarily reduce the size of the classes admitted in order that sufficient facilities may be available for properly instructing those who are accepted.

It is a good sign in American medical education that the small college has been recognized as occupying an important, if not the most important place in the field of practical medical education.

There is no good reason, either practical or theoretical for

believing that the profession or the public would be benefitted by closing our smaller institutions and by permitting but one large university to give medical instruction in our important cities.

Large endowments and finely equipped laboratories are important matters in medical education, but one or both, of these cannot compensate for the absence of personal attention and contact with competent teachers on the part of the men who are seeking medical training.

G. H. W.

BENZOL IN LEUKEMIA.—Spiegler's patient was a woman of 38 with myeloid leukemia. After two months of benzol treatment, she was much improved, but returned five months later with extreme anemia, only 1,400 leukocytes, and multiple hemorrhages in skin and mucous membranes. At one count the leukocytes numbered only 400. Necropsy revealed signs of severe toxic injury to the parenchyma of various organs, especially marked in liver and kidneys. There was no manifest change in the spleen, but the granulated elements disappeared from the blood and lymphocytes took their place. Two similar cases have been published in which the leukocytes dropped under benzol from 988,000 to 1,720 and from 56,000 to 5,300 and later to 200. These experiences impress the necessity for vigilant and repeated control of the blood count as indispensable whenever benzol is being given.—*Wiener klinische Wochenschrift, Vienna*.

THE CLINICAL SIGNIFICANCE OF LOW BLOOD PRESSURE.—According to Piersol, low blood pressure is but a symptom and must never be regarded as a disease per se. When encountered it calls for a prolonged and careful search to determine its underlying cause. In this fact lies the essential feature of its treatment; namely, to find and remove the cause. When due to the acute infectious diseases, appropriate measures should be instituted to promote adequate elimination of the toxins of the disease and to stimulate the flagging heart or failing vasomotor mechanism, as the case may be. When in the course of chronic visceral disease low blood pressure indicates the onset of cardiac weakness, rest, proper food, and stimulation of the weakening cardiac muscle must be resorted to. If the hypotension is but the manifestation of some cachectic state, the cause of the cachexia must be removed if possible. When it results from hemorrhage or dehydration of the system due to persistent vomiting and purging, not only should measures be instituted to relieve the underlying cause, but the depleted volume of circulation should be restored and maintained by the use of normal salt solution intravenously, subcutaneously, or by the bowel. In the type of case referred to last, in which the low blood pressure has no definite discoverable cause other than poor hygiene and malnutrition, much can be done by forced feeding, proper rest, fresh air, cool bathing, properly graduated exercises, and the use of such drugs as iron and strychnin to overcome the anemia and restore the general muscular tone of the individual.—*Pennsylvania Medical Journal*.

GLEANINGS

PITUITARY EXTRACT IN OBSTETRICAL PRACTICE.—Watson (*The Canadian Medical Association Journal*) reaches these conclusions:

Pituitary extract has a powerful effect in inducing and in strengthening uterine contractions.

The type of contractions induced is similar to that which occurs normally, although at first there may be a tendency to prolongation of the pains.

Such prolonged contractions result in slowing of the fetal heart, but the child is seldom in danger.

When given in the late part of the first and in the second stage of full-time labor the polarity of the uterine contractions is not interfered with, but in early abortions and early in the first stage a simultaneous spasm of the os may occur.

Its chief field of usefulness is in the first and second stages of labor, when there is delay due to feebleness of the pains, alone or when combined with other complications, such as malpositions of head, malpresentations, multiple pregnancy, slight narrowing of the pelvis, etc.

In the induction of abortion, in the treatment of abortion already in progress, and in incomplete abortion, its action is so uncertain that it is not to be recommended except in cases in which the os is widely dilated.

In the induction of premature labor its effects are uncertain, but if sufficient dosage be given they may be good.

In the induction of labor at full term and after better results are obtained than in premature cases.

It gives good results in many cases of postpartum hemorrhage, but is not superior to the various preparations of ergot. It has the power of sensitizing the uterus, so as to allow these preparations to act more powerfully, the combination being most effective.

It is a useful adjunct in the treatment of placenta previa, when employed in conjunction with rupture of the membranes, the use of hydrostatic dilators, or turning.

EXPERIENCES IN THE BALKAN WARS.—Kuerdjikoff had charge of a hospital that cared for 2,289 wounded and 654 sick soldiers during the two campaigns, and here presents some of his impressions of modern warfare. Gunshot and shrapnel wounds are never aseptic, he remarks, but if the first aid measures are properly applied and the wounds treated humanely by surgeons and nurses, if the wounds are not infected by officious meddling, very few infections result. Some of the wounded were brought across the mountains in ox-carts, and many of the injuries, furrows burrowed by bullets or seton wounds, the bullet boring straight through

limb, chest or lung, had healed spontaneously on the way. He found that several small incisions through the skin materially hastened the healing of gaseous phlegmons. They were common, and developed rapidly, the second or third day after the injury, and gangrene developed in the cellular tissue and especially around the vessels. By releasing the gas through multiple small incisions, there was no further pressure on the cellular tissue and vessels, and as the blood-supply of the region returned to normal the tendency to gangrene was averted.

He frequently found that the bullet had turned completely around in its passage through the tissues, the point turned backward. The most remarkable course was that of a Mannlicher bullet which hit the skull in the left temple, ran around the skull, passed through the muscles at the back of the neck, then through the lung and back muscles, stopping finally under the skin near the second sacral vertebra.

The guiding principles in military surgery, he reiterates, are to refrain from doing harm, and to release pus. Soldiers under 25 are not fully developed, and after 35 they cannot stand what they could before, but between these age limits the recuperating power is almost incredible, and mutilating operations are rarely needed. He operated only in 194 cases, including all in which he removed the bullet or sequesters under a local anesthetic or made large incisions to release pus. The mortality was scarcely 1 per cent., including all who died from a superposed infectious disease, cholera, small-pox or tetanus. He adds that 3 per cent. of the Bulgarian surgeons at the seat of war succumbed to disease; two were shot and about 1.5 per cent. were wounded. He estimates that about 110,000 of the fighting force were wounded and 60,000 of them died of their wounds or disease, while 10,000 were left more or less incapacitated. Boiled water to which 3 or 5 per cent. of tincture of iodine had been added was used freely to flush wounds and pus pockets, and proved a blessed reliance. A salve of 20 parts balsam of Peru in 80 parts petrolatum was also much depended on. The total absence of all septic complications he ascribes to these and to the systematic use of moist dressings, gauze dipped in a weak disinfectant solution.—*Journal American Medical Association*.

THE TREATMENT OF CORNS AND WARTS BY IONIZATION.—Jones (*British Medical Journal*) first uses a zinc positive needle for the centers or foci of the corn, and this is followed by ionization of the whole affected area with a zinc plate and a pad moistened in the usual way with a zinc salt. It is usual to prescribe a compress of zinc sulphate of a strength of one per cent. to be applied for some hours before the ionization, in order to have the horny epidermis imbibed with the solution beforehand, so far as this can be accomplished by simple diffusion.

After such treatment corns on the soles of the feet disappeared in three or four weeks, leaving no trace. As to warts, transfixion with a zinc needle with a milliampere of current for a minute suffices. If large the wart is transfixed crucially. A little more current or a longer time may sometimes be desirable.

When warts are numerous and small and close together, ionization with a pad and zinc solution is quicker than needling of the individuals. For

some warts magnesium answers very well, especially for the flat multiple warts of the backs of the hands and of the face. There seems to be some evidence that the magnesium salts by the mouth exercise a specific influence upon warts, causing them to crumble away and disappear in a very few days.

THE TREATMENT OF HABITUAL CONSTIPATION.—Einhorn writing on this very common and important condition in the *New York Medical Journal*, says the first point is to reassure the patient and tell him that constipation is not such a great misfortune. That means that he must be assured that if his bowels do not move for a day or two nothing will happen to him. This is a point of great importance: We should try to interfere as little as possible, and to bring back the lost habit of having a bowel movement every day. That can be done by training the system. It will take a long time, perhaps, but ultimately you will succeed—not in every case, but in a great many of them.

The great French physician, Trousseau, was aware of this fact, and he introduced a form of training which was that the patient should go to the toilet every day at the same hour, and try to have a movement. If he fails one day, he goes the next, the third, and the fourth day, and keeps that up. Here, again, a little more detail is necessary for I have found that some things are done wrong. The rule is that the patient should remain seated for five to eight minutes; he should not exert himself too much, and if he overdoes it, it is worse than time wasted. If too great an effort is made, the exertion brings on hemorrhoids. Any natural process must be done in an easy way, or some disturbance is sure to follow. So the question of habit is of the greatest importance.

Now, with regard to diet. That should be arranged to facilitate the bowel movements. It is done in the majority of cases by giving bulky foods, fruit, and salads that contain a great deal of organic acids and cellulose, matter which is not digested, bulky foods serving to bring on more efficient peristalsis. I have already spoken of water. Enough water should be given to the patient. Butter is another substance which is good. Special forms of diet have sometimes to be arranged to suit the condition of the stomach, but in a general way a very liberal diet should be maintained. Bran acts well—bran bread. Some physicians (Doctor Gallant) prescribe bran flour, prepared or eaten in its natural state, one tablespoonful, three or four times a day.

Schmidt, acting on his theory that there is too great utilization of the foods taken, introduced agar as a remedy for constipation, but he found that while agar is good it is not good enough to bring on a movement, so he combined it with cascara, to regulate the bowels. A few years ago I thought I would like to have some other remedy which would act in a similar way, and I made a combination of phenolphthalein and agar. This contains three per cent. of phenolphthalein and taken twice a day, or sometimes three times a day in teaspoonful doses, is very beneficial. One advantage of these agar preparations is that the remedy in the agar does not come out quickly from the agar substance, but is absorbed slowly through osmosis, and in this way covers a large area of the intestines. The intestine is long, and if you want to give special remedies for the

bowel it is well to give them so that they shall be spread out over a large area. This the agar does, and it also takes up water. This is another quality which is favorable for affections of the bowels, for it lubricates the fecal matter. In constipation too much moisture is taken away by the system, and the fecal matter is too dry and can hardly be pushed along, but the agar swells up and the water in it does not come out; the agar has a greater affinity for the water and retains it, while with other matter it is released more readily. This is the idea in combining agar with remedies for the bowels. I have carried the same principle further and have combined agar with tannic acid for the treatment of diarrhea—to obtain the effect of lubrication and of having the remedy carried over a large area.

Phenolphthalein-agar, a teaspoonful twice a day, is the usual dose. This should not be ground up too fine; if it were in the form of a powder it would be partly absorbed and less efficacious. For this reason the agar flakes should be somewhat bigger. Then I have a combination of rhubarb agar, also about three per cent. This is a little weaker than the phenolphthalein-agar and can be taken in the same quantity as the latter. Although as a rule we should not use too many remedies to cure constipation, still we often cannot get along without them. It is easy enough to say, do not take anything, but if the patient has no movement, he will be dissatisfied, and will leave you and go to another physician. Therefore mild cathartic remedies can and should be given, but the patient should be impressed with the importance of taking as little as possible; trying a certain amount for a little while, and then reducing it slowly and little by little. That is the principal thing. If you can get the patient to do that, you can get him to a point where after a while he does not need to take anything.

Along with the mild cathartic remedy you can also institute a proper diet and a right way of living. There are many other means of helping constipation. There are physical means of treatment, such as massage of the bowel and abdomen. That can be done either by an experienced masseur, or by automassage. The patient can massage the abdomen every morning for five minutes or so, going along with his closed fist over the colon. Professor Sahli advises for this purposes a five-pound cannon ball, which the patient passes over the abdomen, rolling it around in a circle. There are many cases, however, in which massage is not advisable—cases of very lax abdominal walls especially, where the organs are not well protected, so to speak. In such cases, if the massage is a little too rough, inflammation of some organ may develop.

Electricity has been applied, by putting one electrode on the abdomen and the other at the back or in the rectum. This is best done with an electrode which permits the water to come slowly into the rectum. Static electricity has been employed by Doumer and others in France. Then there are gymnastic exercises for the abdominal wall—bending, sitting up, rowing, walking, etc.—all that comes under the head of exercises for the strengthening of the abdominal muscles.

Hydrotherapy also has been used—having a douche for the abdomen, going over the entire abdomen, over the colon, etc. Injections into the bowel also form another mechanical measure—plain saline injections, about a quart at a time, may be employed. I usually advise that these

be given in the evening, so that the patient has a chance to have a bowel movement spontaneously, and if that fails, he can then take the injection.

Kussmaul and Fleiner recommended olive oil injections as a remedy for habitual constipation, and there is a great deal of good in this treatment. Give six to ten ounces of olive oil at blood temperature, injected into the bowel, to be retained over night, and there is usually a movement in the morning. This can be used every night for three or four weeks, then every other night for three weeks, and then twice a week for a long while. Sometimes this treatment is followed by very good results. It is especially important in spasmodic forms of constipation. Boas believes that there is no special form of spasmodic constipation. Schmidt and others think that it is only caused by inflammatory conditions accompanying habitual constipation. This form is benefited more than others by the olive oil treatment. Olive oil in tablespoonful doses has been given by the mouth by Westphalen. Later on liquid paraffin was advocated by Sir Arbuthnot Lane, of London, for the same purpose. A teaspoonful to a tablespoonful of liquid paraffin given twice a day acts well in some cases. The latter has also been advantageously employed in the form of small rectal enemas of three to six ounces.

Ultimately, operations have been advocated for the treatment of habitual constipation. I am not much in favor of them. Doctor Lane's operation and the autotoxication theory go together. I spoke against the one before I speak against the other now. A patient is frightened, and told that he should be operated upon. He does not know what to do, and he is operated upon. Afterward he may or may not be better, but it is not the thing to be done except in rare instances.

A WARNING AGAINST RADIUM.—The editor of *Medical Review of Reviews* sounds a timely warning to physicians in regard to advising patients to undergo treatment by radium. He states that expectation of cure is arising in the minds of countless patients whose growths have reached such proportions as to make them inoperable. Families are gathering together their paltry dollars to pay tribute to the majestic therapeutic touch. The public must be undeceived; the profession must be warned; radium is not a cancer panacea. For superficial lesions, it possesses some value; for deep seated cancers, it appears to be valueless; for large growths, even though superficially located, surgical treatment is of primary importance and the treatment by radium of secondary importance.

The mystery of radio-activity appeals to many. The practical benefits to be derived by the use of this agent alone deserves consideration. Thus far, radium has accomplished little and what its future is; no one knows. Investigators, clinicians, and chemists have much work to perform before we shall know the truth about its action in various carcinomatous conditions. While trusting that the future may reveal the infinite value of radium in the treatment of cancer, the profession and the public should assume the position that its final worth has not been proven. Both should maintain an attitude of openmindedness and hopefulness and not be blinded by the public statements which have cast a halo about the costly tube of radium. The public must not be exploited and the profession must not be betrayed by utterances that should be guarded. The records

of the failures must be presented as well as the glowing accounts of the successes.

The treatment of cancer among the wealthy is no more a matter of public concern than is the treatment of cancer among the poor. The ethics of the profession do not permit giving full accounts to the press of the diseases and treatments of individuals, save with the consent of the patient. The real subject in which the public is interested is in the cure of cancer.

The significance of an early diagnosis should constantly be pointed out. The discussions of the moot points in treatment should be confined to medical journals, save in so far as may be given to the press in a calm, dispassionate way, describing the general effects and methods underlying specific treatment. The prevention of cancer, the early diagnosis of cancer, and the cure of cancer are indeed of vital importance to humanity. Precaution should be taken to build up public knowledge and intelligence so that it may be able to perceive the advances of medicine. Similarly, every safeguard must be taken to prevent the abuse of the confidence of the public in the carefulness, accuracy, and scientific advances of the medical profession.

PROPHYLAXIS AND TREATMENT OF FUNCTIONAL HEART DISTURBANCE IN CHILDREN.—Nobecourt emphasizes the importance of the injury liable to be felt by the cardiovascular apparatus from a too sedentary life, unhygienic attitudes in school and overstudy. Sitting still too long and lack of exercise increase the work of the heart as they reduce the activity of the peripheral circulation, while contributing to constipation, anemia and dyspepsia, all of which in turn react on the heart. Mild muscular exercise counteracts all these, but if the exercise is excessive or too long continued the children suffer equally from the other extreme. The circulation in children adapts itself with extreme facility to variations in movement, but prolonged effort is impossible and especially injurious if persisted in. Walking, to be a useful exercise, should be brisk and kept up for some time. It is not always good for children, and often entails a more or less durable dilatation of the heart. Games and sports should not be allowed to become competitive battles.

Gymnastic exercises are often directly injurious; the holding of the breath retards the circulation and fosters congestion. Swedish gymnastic exercises affect the circulation favorably but children find them tedious. Mental work dilates the carotid arteries; the heart-beat is liable to become accelerated, and the radial pulse smaller while the blood-pressure rises. He adds that when there is already some functional heart disturbance, there is still greater need to supervise the physical exercise, graduating it to the special case, as the main therapeutic reliance, supplemented by hydrotherapeutic measures, massage, care in the diet and measures to soothe the nervous system, respiratory exercises, etc. Abnormal excitability of the heart may be combated by valerian and belladonna, alternating each for twenty days. Or atropin can be given in the daily dose of a tenth of a milligram for each year of age. This is especially useful in paroxysmal tachycardia.

PRACTICAL MANAGEMENT OF CHRONIC OSTEOARTHRITIS.—Roberts states in considering the treatment of osteoarthritis, the problem presented is to remove discernible foci of infection, improve local nutrition, correct such deformities as tend to put undue strain on weight-bearing joints, and to place the painful parts at rest, so far as that is possible. So-called anti-rheumatic remedies, such as the alkalies, salicylates and iodids, have no effect on these conditions and should be avoided because of the digestive disturbances which frequently follow their exhibition. The diet usually prescribed for "rheumatism" is harmful, because it denies certain elements of nutrition which the economy demands. Such treatment as is afforded at the various watering places is at best of merely temporary benefit and has at times been observed to be a source of real injury. Massage and manipulation of joints with the idea of keeping them pliable is an inexcusable error, for it serves only to perpetuate the irritation of the already sensitive tissues. It would seem, too, that the importance of correcting visceroptosis in these cases has been very much overestimated.

Where a focus of infection exists, it should be removed. Vaccine treatment offers much that is hopeful for the future, but it is still in the development stage. The essentials of treatment followed by Roberts in his cases have been the administration of glandular preparations, rest, a diet reducing the intake of calcium, and the use of the d'Arsonval or bipolar high frequency current.—*Medical Record.*

ALTERNATING HOT AND COLD BATH.—Dausset and Hanriot recorded the blood pressure, etc., in a healthy person in a warm bath; then hot water was added to bring the water to 42 or 50 C. After one or two minutes of this, cold water was added until the temperature was felt too cold. The vascular system is exercised to a remarkable extent by these temperature changes in the twenty-minute bath, but the changes are so gradual that there is no sudden shock. They say that oxidation processes are promoted, heat production is regulated, and sluggish elimination whipped up while the reflexes are brought back into physiologic limits.

SCARLET RED OINTMENT.—Scarlet red ointment is frequently prescribed in such a manner as to leave the selection of the base for its incorporation to the judgment of the dispenser. Soft paraffin is the base most frequently used. The dye, however, is nearly insoluble in this medium. It would seem reasonable to suppose that particles of a substance coated with another substance in which they were insoluble would have little or no action upon the tissues with which they were brought in contact. The dye is soluble in benzoinated lard, and the ointment so made is smoother and probably more efficient.—G. M. Berringer, *American Journal Pharmacy.*

STRYCHNIN.—In the October number of the *Quarterly Journal of Medicine*, John Parkinson and R. A. Rowlands, state that strychnin is widely employed as a rapid heart stimulant. Their inquiry was undertaken to obtain evidence as to its immediate effects when given subcutaneously, in cases of severe heart failure. As a result of such investigation upon fifty cases, in which the dose was uniformly one-fifteenth of a grain of

strychnin sulphate, their conclusions are: they found no evidence that the subcutaneous injection of a full dose of strychnin in cases of heart failure with a regular rhythm, produces any change in the blood pressure, rate of pulse, rate of respiration, or general symptoms, within the hour following its administration. In cases with auricular fibrillation, strychnin produced no change in the rate or regularity of the pulse rate, of respiration, or general symptoms during the same period. They conclude that strychnin has no effect which justifies its employment as a rapid cardiac stimulant in cases of heart failure.

IMPORTANCE OF SUBJECTIVE FACTORS IN EATING.—Sternberg has long been preaching that food is liable to fail of its chief purpose unless it appeals to the sense of sight, smell and taste, with variety in the mode of preparation, appetizing seasoning and the dishes freshly prepared. He thinks that much of what we are calling "vitamins" is included in the above. He has long been reiterating that the housekeeper's main dietary task is to cultivate the subjective factors, but as a rule this is disregarded as of little moment. He insists that our sense of smell and taste recognize chemical changes more sensitively than we can detect them with chemical tests. Warmed-over dishes, especially vegetables, do not relish as at first; some chemical change has occurred in them. This change has rendered them less wholesome for the person who finds them less palatable. Loss of appetite, disgust, nausea, vomiting and finally some dietary deficiency disease, form the sequence, and loss of relish should warn that we have entered on the downward slope. Sternberg emphasizes anew that the science of cooking is far more than merely applied chemistry and physics and application of heat. It is rather applied physiology of the senses, applied esthetics and applied psychology. It is a matter of taste in the widest sense of the term.

TETANUS FOLLOWING OCULAR INJURIES.—The author adds the twentieth case to those already described in literature. The patient was an alcoholic youth, aged eighteen years. Four days previous to his admission he had applied to the country doctor, who found a slight scratch of the conjunctiva, caused by an instrument which the patient had used to pry off a piece of wood. No foreign body could be seen and the vision was good. That same evening, however, the patient found he could not see with that eye. Four days later he was sent to Vinsonneau, who determined a beginning proupthalmitis. Enucleation under general anesthesia was done the next morning. Nothing of interest was seen in the wound on the following day, but the patient complained of a difficulty in eating and swallowing, which was attributed to the use of the mouth gag during the anesthesia, as no lingual or buccal lesion could be seen. Two days later the condition was the same. In the evening well marked tetanus had developed. The usual treatment was instituted, but intracranial injections through a trephine opening was not made because the patient was a minor and the case one of industrial accident. The patient died the next morning. When earth has been introduced into the ocular wound one should always use the antitetanic serum, and Vinsonneau prefers the intravenous and intracerebral to the subcutaneous method. In fresh cases one should

inject the serum into the region of the sphenoidal fissure and the optic foramen. Vinsonneau prefers the eunucleation to exenteration, except in the case of young children, when enucleation would give rise to a hemiatrophy of the face.—Dr. Vinsonneau, Angiers, *Arch. d'Ophthalmologie*.

WILLIAM SPENCER, M. D.

OPTIC NEURITIS IN THE COURSE OF MEASLES.—A girl of seven years lost her vision after the disappearance of the eruption of measles. The pupil was fairly well dilated, although no eye drops had been used. The optic disc was bluish white, and there was peripillary edema. On account of the fairly frequent association of measles with diphtheria, the case was treated with Roux's anti-diphtheritic serum. In all, five injections of 20 cm. each were given at intervals of four days. Some improvement of vision was noticed by the patient the day after the injection. She lived at some distance, so that she was not seen by the surgeon until four days after this injection, when she was able to count fingers and to go around alone. The vision steadily improved, reaching normal by four weeks after the first dose of serum. She was seen five months after the occurrence of the amaurosis, when the vision was perfect. Notwithstanding the clinical improvement, however, the appearance of the optic disc remained as at first.—Fernandez J. Santos, *Annals de Optalmologie*.

WILLIAM SPENCER, M. D.

BLINDNESS FROM FELIX MAS.—A man, aged 25 years, took for ankylostomiasis, 18 capsules of ethereal oil of filix mas, and 12 capsules the next morning (15 grammes in all). The same day, despite a saline purge, there developed headache, buzzing in the ears, palpitation, waves of heat, and shaking alternating with prostration. The next day, after a bad night, he awoke completely blind. There was moderate mydriasis, no pupillary reaction, no light perception, moderate binocular papillitis with signs of stasis, but without hemorrhage nor muscular lesions. In spite of the upbuilding general treatment, sub-conjunctival injection of sodium chloride and of sodium nitrate, the appearance of postneurotic atrophy replaced that of papillitis and the blindness remained definite and complete. The literature is reviewed and the danger insisted upon of even moderate doses of the oil of felix mas. It would be prudent to replace the vermifuge with strong doses of thymol for ankylostomiasis.

Perrod notes that the discs of this patient, particularly in the right eye, during the atrophic stage showed some little spots of pigment run together in the nasal border. Antuelli holds that this new formation or pigmentary migration confirms the importance of the pigmentic outline, total or in sections, that has been noted following neuritis or neuroretinitis among the rudimentary ophthalmoscopic stigmata of congenital syphilis. Antruelli insists that this pigmentation is clearly different in disposition and aspect from the choroidal ring.—*The Journal of Ophthalmol. and Laryngol.*

WILLIAM SPENCER, M. D.

BLINDNESS FOLLOWING ACUTE POSTHAEMORRHAGIC ANEMIA.—When the ophthalmoscope shows enlarged tortuous veins and fibriform arteries these

show a disturbance of the normal equilibrium between intraocular venous tension and the obstacle which the blood must overcome to escape from the eyeball. Retinal ischemia is due as much to insufficiency of arterial supply as to venous obstruction; in certain cases, however, says Bettremieux, a paraentesis or an iridectomy can re-establish the circulation by lowering the tension. He has obtained the same result with his simple sclerectomy in a case of chorioretinitis with repeated transitory visual troubles due, according to him, to retinal ischemia. This operation, drawing venous blood to the fibrous pericorneal region (which acts as a thick barrier to it) facilitates the afflux of arterial blood, diminishes the obstacle to venous escape and that without exposing the case to hemorrhages from venous stasis or friable vessels. Bettremieux advised this operation as promptly as possible in blindness from hemorrhage. He would try the operation even in case of pallor of the disc with dilated pupil immobile to light. In fact, several hours after the hemorrhage it is not a true atrophy, but in a very pronounced anemia of the disc, and sight may return after several weeks of blindness. Even absence of the pupillary reaction is not always in this case an index of irremediable blindness.—*The Jour. of Ophth. Otol. and Laryngol.*

WILLIAM SPENCER, M. D.

THE ANATOMICAL EFFECTS OF MESOTHORIUM AND X-RAYS UPON CANCERS.—Haendly has studied five cases treated, the specimens from three of which having been obtained by operation and two were obtained post-mortem. Examination showed that carcinomatous tissue is undoubtedly destroyed by this treatment, and the same changes in the nucleus and in the protoplasm described by others were found in these cases. In the upper layers where necrosis is produced, no cancer cells are found. In the deeper tissues changes were also found both in the cancer cells and in other tissues. The action is, however, not uniform, for in the neighborhood of degenerating and destroyed cancer cells other undoubtedly living carcinoma cells were found, sometimes in strands. It may be said that the deep action of these days as heretofore used is not uniform or sufficient, and yet it is likely that with suitable filters an universal deep action may be accomplished without injury to healthy tissue.—*Arch. f. Gyn.* 100—49.

THEODORE J. GRAMM, M. D.

INTRAVENOUS INJECTIONS OF AQUA DESTILLATA IN PUERPERAL SEPSIS.—From a suggestion made some ten years ago to use very dilute solutions of silver nitrate by intravenous injection in puerperal sepsis, Ilkeewitsch (Moscow), was led to experiment with greater dilutions than proposed, and had uniformly good results with all of them. He, therefore, concluded that not the medicament but the vehicle seemed to be the potent agent, and since then has used aqua destillata by intravenous injection on this infection in 142 cases with good results. The blood picture showed one of these effects: (a) The number of white and red blood cells is increased and the hemoglobin remains the same; (b) the white cells increase, the red cells and the hemoglobin decrease; (c) red and white cells and the hemoglobin all decrease. Those cases in which the number of red cells

increase, mostly recover, even when there is a decrease of white cells. The fatal cases are those wherein is observed a constant decrease of red cells. Here a local process usually calls for operation. After injection the temperature may rise greatly, but will reach normal by the next morning. In the most serious cases terminating fatally the heart, lungs or kidneys are usually affected, and hemolytic streptococci are usually the cause of the infection.—*Zentralbl. f. Gyn.*, 1913—1399.

THEODORE J. GRAMM, M. D.

THE DIFFERENTIAL DIAGNOSIS OF HEMORRHAGE IN TUBAL PREGNANCY AND IN EARLY UTERINE ABORTION.—Futh (Cologne) thinks this subject of importance since extra uterine pregnancy is often not recognized and the patient curetted on account of hemorrhage with absent menses. The previous history in such cases is of pre-eminent importance, and should take into account gonorrhea, disturbed puerperal period, pain in the beginning of pregnancy and increase of the same from inflammations. Objectively the case may not be clear since the uterus, both when the pregnancy is normal and when ectopic, may be equally enlarged and soft. If a one-sided adnexal tumor be felt we should remember that there may also be a recent pyosalpinx present, and that from this cause also the menses may be absent. Under such circumstances the character of the hemorrhages must be considered, for besides the pain one of the characteristic symptoms is hemorrhage. This appears either at the end of the menses, in the interval or after one or more absent menses, and is permanent in character. This symptom is obviously different in intrauterine abortion. Winter suggests the sound in these cases for determining the existence of abortion, but of course the greatest caution must be employed. The character of the blood is also of diagnostic importance. Clots indicate intrauterine abortion and prolonged, slight hemorrhages in extrauterine pregnancy are rarely associated with the formation of clots. The blood in extra uterine pregnancy is dark, while it is bright when coming from intrauterine pregnancy. If flesh-like pieces are discharged we must think of membranous dysmenorrhœa besides intra- and extra uterine pregnancy. When coming from intrauterine pregnancy portions of the white fetal sack are visible, whereas the decidua only appears when the pregnancy is extra uterine. The Abderhalden test unfortunately cannot determine whether placental remains are present in the uterus or in the tube.—*Abstr. Zentralbl. f. Gyn.*, 1913—1281.

THEODORE J. GRAMM, M. D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

PATHOLOGY AND HOMOEOPATHY.—In regard to the study of pathology, it is important to remember that that science has not as yet said its last word. Are we even quite sure that it is out of its swaddling-bands? Facts endure. The interpretation put upon them, however, is subject to astonishing feats of volte-face, as the magical touch of some new genius gives them a twist. In fact, we may well find the pathology of to-day rendered just as absurd and futile as that of yesterday, and of previous yesterdays, by new facts or a new interpretation of the old ones. All this throws a totally different complexion on the vital reactions in which micro-organisms, toxins, autotoxins and antitoxins are concerned in relation to the human economy. And a great deal has yet to be thought out, and worked out on that subject of supreme importance—*Resistance*. It is just this defective resistance and the methods needful to raise the same, which are, after all, the practical aspect of the matter, at least from the therapeutic point of view.

It is possible, then, that science may yet have a surprise packet in store for us, in regard to the significance of micro-organisms in disease. How many are actually causative? How many only casually associated with it? Are any, by any chance, mere scavengers?—and, in their myriads even favorable to the patient in his struggle? Shall we be told some day, that the prognosis for life will depend on the number of cocci in the exudate? Possibly not. Yet one cannot help looking forward to the probability of some new light suddenly flaring through the mist with shifting gleams that we call science, with the enunciation of some such startling theory; and one, even devoid of imagination, can vividly picture the pathologists once again tumbling over one another in their eagerness to demonstrate, and exploit, and utilize the new doctrine.

Meanwhile, as you so lucidly point out, Hahnemann's direct method has, all through, gone to the root of the matter. It still holds firm, like an anchor to bed-rock, deep below all the surging waves of science that tumble about and fret the surface. *Nothing exists without a cause*. Even the most trivial-seeming symptom has something back of it. "We can know nothing of the sick man, except through his symptoms." And it is the sum of his symptoms, that is the sum of his pathology; not, as you shrewdly point out, merely his "obvious morbid anatomy." Nummular

sputum is one of the symptoms of the patient, a common symptom in phthisis. The bacteria in the sputum are also a symptom; again a common symptom in phthisis. They were there centuries before the scientist was able to demonstrate them under the microscope. The fact that the phthisical patient reacts badly to hot, moist impure air, and improves in cold, dry altitudes belongs also and equally to his symptomatology, his pathological picture. It is hence far more important to the life of the patient that his physician should recognize his reactions to cold and heat, to damp and dry, to oxygen and to carbon dioxide, than that he should be able to stain his tubercle bacilli, valued indeed as confirmatory to the diagnosis.

"Ah, but! if you know the organism, you can employ it, or its antibody, or its endotoxin, or its something-or-other else, to combat his disease!" A secret—and so you can, even if you do *not* know the organism, and that is where homœopathy is more than half a century ahead of pathology. Preparations from tuberculous sputum, from caseous gland, from broken-down lung tissue, were made, ground down, potentised, and used with success long years before the pathologist began to dream about them. Pathology is just now beginning to take into account the other organisms, such as the pyogenic cocci, that have also to be reckoned with in cases of advanced phthisis. But homœopathy covered the whole picture from the first, when it prepared its drug from the morbid mass, instead of test-tube cultures of the one organism. And it did the same early last century for anthrox, variola, syphilis, and nearly all the diseases under the sun. As you say, sir, Hahnemann's methods go to the very root of the pathology of the case.

Pathology may be able to tell us some day why one patient is stiffened and agonized by a passing shower, and why another only moves and breathes in freedom when it is raining; and how certain remedies are causative, and therefore curative in the latter condition while others are homœopathic to the former. This is the useful kind of pathology with which science, other than the science of healing cannot at present deal; yet it is covered by the homœopathic prescription. And that *it* is so is proved by the fact that patients treated according to the law of similars (according to their whole pathology, as Dr. Charles E. Wheeler so aptly puts it, revealed in their symptoms) actually tell us again and again, that they have lost their extreme sensitiveness to damp, or cold, or whatever it may be, as they improve in health and well-being. Yes! pathology is fascinating, and often most helpful; but we have to remember that it has not yet said its last word. And at times it even seems far more helpful than it really is! In fact it is always very positive at first, and then goes back on itself, as experience advances. For instance, we learn now that the sero-diagnostic test of Wassermann wherein we so trusted is also "positive" in scarlet fever, in lichen planus, in acute lupus erythematosus, in leprosy, and in nagana or the sleeping sickness with which disease Sir David Bruce has been so eminently connected.

Again, does the von Pirquet test always come off? Men new from the schools hold it in a very different estimation. It always seems to me, standing a little aloof with critical eye, that by the time the practitioner has surmounted the scepticism born of a long and a sad experience, and

has taken a test or a treatment to his heart, and has started applying it gaily around, the thing is already, at least in part, disproved. For what we call pathology is merely what is known of it at any given moment; while behind, the great unknown lies always in wait, shrouded in darkness. And yet, it is always the great unknown that we have to deal with, in treating our patients. As you say, every symptom (i. e., every deviation from the normal, from health's happy adjustment to environment) must have a pathological basis. And we shall wait long, and try many experiments in hope, and abandon them in despair, before we can treat the majority of the patients who come to us for help on pathology as revealed to us in the laboratory. Whereas, in the law of Hahnemann, we have, as you point out, a means of covering the whole pathology; of prescribing absolutely pathologically, ages before science can demonstrate, if it ever can, the whole inwardness of many of our cases or give them a name or an explanation.

And that is why, as science gradually opens its blinking eyes to the light, and discovers fact after astonishing fact, the one thing that perennially bobs up and stares in its astonished face is homœopathy. But, mind, science is discovering the real thing. It is none of your empirical prescribing; the ancient and very routine "drug-that-is-generally-found-useful-in-these-cases" sort of thing. No, the way that science is rediscovering homœopathy is by way of what we call the nosodes—the virus of disease—the nearest simillimum of all—the very disease itself, but changed, as Hahnemann himself contended, "from *idem* (isopathy) into *simillimum* (homœopathy)" by the preparation it must undergo before it can be used. And that is so. It is changed. For a man may be absorbing or swallowing any amount of pus, and it does not cure his suppurations; but give him his pus, triturated and potentised, and you will quite promptly waken up his resistance. And when science starts using *that-which-causes* in order to cure, it has to fall, willy-nilly, into Hahnemann's methods, so long neglected and decried by many of his own "followers." It is demonstrating to the hilt his single drug, his single dose, his phase of homœopathic aggravation (Wright's negative phase), his succeeding period of amelioration with which (and here again science again endorses him) it is dangerous to meddle. And it has to reduce again its dosage, exactly as Hahnemann did one hundred-odd years ago. It needs only to extend a little its present knowledge—only to get an ankling that other drugs that *cause may be used to cure*—only to apply potentisation, Hahnemann's other, and very great discovery (which science has already got on the chemical and physical side) to drugs, to utterly flabbergast and beat your "prescribers on obvious morbid anatomy" on their own (not too well cultivated) ground. When mere ill health becomes concrete in say carcinoma, fibroma, calculus, a thing that you can feel and handle; *that* and not the symptoms to which it may, or must give rise, is the ultimate. Hematuria may be a very important symptom of a patient, dependent in such a disease as renal calculus, for instance, on a purely mechanical cause. Had the patient been normal, his secretions would have been normal, and he would not have ultimated in gross tissue changes. The real disease of the patient himself we can get at only through his general symptoms; symptoms peculiar to himself as a whole, quite apart from symptoms that are

merely dependent on a mechanical cause, that would promptly disappear (not being a part of his inherent pathology) if the tumor, or whatever it may be, were removed. Surely this is where surgery so often succeeds. It removes the tumor or the calculus; its field does not apply to the talent for the production of tumors and calculi inherent in some individuals. Hence surgery and medicine often go hand in hand in the treatment of disease. Each has its place in treatment. Each has its limitation in treatment. Both very often require the help of the pathologist, from whose aid treatment is very frequently abridged and simplified.

Correspondence between Drs. C. E. Wheeler and M. L. Tyler.—Dr. M. L. Tyler, *Homoeopathic World*.

TRITURATION.—At a meeting of the New York Academy of Medicine, an orthodox body, on December 7th, Dr. Jerome Alexander, and Dr. Jesse Bullowa made the following statements as the result of their experiments: "If one examined the suspension of any fine powder with the ordinary microscope, the individual particles exhibit a slight trembling motion known as the 'Brownian movement.' Although this movement is more marked in the case of smaller particles, it is not sufficient to keep them afloat, and they gradually sink out of solution. But with the ultramicroscope it has been demonstrated that with increasing fineness of subdivision (such as is obtained with the ordinary trituration), the motion of the subdivided particles *continued to increase in speed and amplitude*, until it becomes so vigorous and extensive that the particles no longer settle, but remain permanently afloat, that is, they have what is now termed a colloidal solution. If the sub-division is proceeded with still further they gradually pass into the sphere of true or crystalloidal solutions, wherein the infinitesimal particles of the dissolved (now thoroughly liberated or disintegrated) substances are reduced to molecular dimensions, or are even split up into *ions*." In reviewing these very interesting experiments in a recent number of the *Homoeopathic World*, Dr. Charles E. Wheeler considers that these experiments should also be confirmed by other investigators, as they are of the utmost importance to homœopathic pharmacy.—Charles E. Wheeler, *Homoeopathic World*.

THE THERAPEUTICS OF HYSTERIA.—In the *Iowa Homoeopathic Journal* of recent date there appears an article bearing upon those remedies found useful in hysteria—a disease rather common in this country. Among those remedies dealt with in the *Journal*, scutellaria and ignatia are certainly worthy of more than a passing notice.

Scutellaria lateriflora is indigenous to North America, where it ranges from Canada to Florida and westward to British Columbia, Oregon, and New Mexico. It is a common perennial herb and grows to a height of from one to two feet. Its small blue flower has gained for it the name of blue pimpernel. It habits the borders of wet places, and flowers during July and August. About the first introduction of this plant into medicine was the experiments of Dr. Vandesveer, in 1772, who claimed to have found it curative and prophylactic in canine rabies. Following Vandesveer many empirics and others used the remedy with success. In those

olden days the dose given was a gill of the infusion four times a day, and the plant applied to the wound. Curiously enough, the natural order of labiatae yields species of many of its genera that are valued by the aborigines of countries in which they grow as antihydrophobics. At least some value should be considered under these circumstances; native medication is always the result of long and more or less successful experiment.

Dynamized preparations of scutellaria are of approved valuation in those patients afflicted with sleeplessness due especially to mental strain and overwrought nerves. It helps the nervous twitching and jerking of the limbs and extremities incidental to a highly strung nervous state and it is also a valuable medicine in cases of insomnia followed by hysterical convulsions. In this respect it is similar to coffee crude in high attenuation. Scutellaria produces in the healthy prover a marked nervousness and restlessness. It is a very quickly acting and remarkable remedy for nervous, hysterical women. It quickly calms them. They feel soothed, easy, and rested and the most prominent symptom is better, sounder and more refreshing sleep.

In the domain of toxicology, Gordon's experiments are of value and interest in this connection. Gordon experimented with from 10 to 60 drops of the tincture of scutellaria. His results were substantially as follows: Mental confusion and stupor; headache and vertigo; photophobia with dilated pupils; scanty urine, with difficult micturition; variable pulse with final reduction of the heart's action from 70-72 to 52 with intermission; general languor and tremulousness; followed by wakefulness and restlessness.

The other drug mentioned in the *Iowa Homoeopathic Journal* was ignatia. Allied botanically to both nux vomica and spigelia, and closely resembling them both as regards the control of twitching is concerned, it is often the remedy well indicated in many nervous states. The remedy seems to be most valuable where the disposition of the patient is of a changeable type. It seems especially helpful in states of intense grief, the patient is typically always sensitive, impatient, changeable and of a distinctly nervous bent.

VISCUM ALBUM.—A short monograph on this drug, popularly recognized as the mistletoe, appears in the monthly review for August of *L'Homoeopathie Francaise*, by Dr. Philippe. This interesting parasite as a therapeutic agent is compared by Dr. Philippe to many other remedies in our materia medica. Viscum album, the mistletoe, was not only the sacred plant which the Druids gathered with their pruning bills in the midst of their sacrifices and invocations—it was likewise a remedy which enjoyed a well nigh universal reputation since a very remote period. Pliny relates how the ancient Celts employed it as an antidote, and were the first to perceive its value in the treatment of epilepsy. Still later Paracelsus, Bayle, Carthuser and Van Sweiten employed it in convulsive states as well as in conditions of hemorrhage, and especially in hemoptysis. For Haen, the mistletoe displaced valerian by its usefulness, and Boerhaave said that this plant had been to him of great utility in the twitching of the nerves and convulsions.

Bradley employed it in the treatment of hysteria and consequently it found its way into the old Pharmacopeia. One finds it mentioned in all the works of materia medica, and in the dictionaries of medicine. Venel even accords it an important place in his materia medica appearing in 1787. However, during the course of the nineteenth century, the repute of the drug gradually fell into disfavor. Its antispasmodic properties were disputed. Its reputed effect on the digestive apparatus was looked upon rather dubiously—an irritant action emetic in character, which in reality scarcely distinguished it from a great number of other plants. At last it disappeared from the French Codex, and the apothecaries' laboratory. Viscum album was however introduced into the homœopathic materia medica following experimentation on the healthy prover and from the clinical application of Black, Belcher, W. Huber, J. Wilde, and Boger, etc.

The plant itself belonged to the family of lorenthaceae. It was found all over Europe and was especially abundant on certain trees, such as the poplar, apple, and oak. For a long time it seems to have been universally known, possibly owing to Yuletide festivities. Dr. Black experimented on himself and on three subjects, and we at once recognize the detail of his experiences in the pathological effects disclosed. Proell developed with the tincture of viscum album some symptoms closely resembling an aura and the petit mal. Belcher employed the tincture of the leaves and of the berries in a young girl afflicted with chorea. At the end of two days he found her overcome as if she had taken opium. J. Wilde cured with viscum album a boy of fourteen years who had chorea of the face and limbs; and another of nine years who had a chorea subsequent to a fright. This last case had choreic movements even during the night. W. Huber used viscum album in the following cases: Left sided sciatica, rheumatism following a walk in the snow, and in a man of twenty-two years who having caught cold by traveling in a frosty wind developed a tearing pain in the left side of the lower jaw. To this pain which lasted several hours, was followed a burning and buzzing of the left ear, then a sensation of obstruction, and finally a deafness of that side. These three cases were cured with viscum album. W. Huber also employed this remedy in metrorrhagia subsequent to a menstrual suppression following a cold foot bath, and in another case of metrorrhagia due to a suppression of the monthly courses by exercises in bathing, and still in another case of placental retention following a miscarriage of six months. Black cured with viscum album several cases of sciatica, of lumbago, and of rheumatism. The same remedy he found of curative influence in otorrhea and catarrhal deafness. Among the cases showing the toxicologic action of this drug the following are cited: Two women took viscum album in order to effect an abortion, they presented a paralysis of all the muscles save those of the eyes—a paralysis of the alimentary canal—absolute costiveness and finally death by inanition. A young lad ate some of the berries of the mistletoe and was seized with vertigo and became insensible. He was found with violet-colored lips, injected conjunctivae, dilated and fixed pupils, a slow, full, and bounding pulse and with slow and stertorous respiration. Plantar irritation evoked in the case an active retraction of the lower leg. Regaining consciousness he became violent in his delirium and had visual hallucinations. Concerning the

clinical use of the drug and its comparison with others, there is quite a great deal to be said. Its study reveals to us that it is eminently useful in convulsive states incidental to many conditions of acute and chronic disease. Belladonna presents spasms and convulsive movements. This drug is indicated in a very acute state with intense delirium and hallucinations—it is indicated in congestive head states—in flushed face with conjunctival injection. Ignatia is one of the best remedies for spasmodic affections, as Dr. Philippe points out. According to Dr. Philippe, it is especially useful in chorea which follows sudden emotion. Cuprum has for its characteristic symptom—spasms. It is really of great value in abdominal spasms, a condition which Dr. Philippe possibly neglected to mention in his article. Vincum is able to cause and cure spasms and convulsive movements of different muscles. It is employed in chorea following either fright or else from eruptive suppression. What characterizes zincum on the other hand is its great nervous feebleness, its sensation of pain and great oppression in the neck, anemia and tremblings. Another and a very important one is intense nausea and constant sick stomach. Tarantula hispana is also of value in spasms and jerky bodily movements.

CIMICIFUGA RACEMOSA.—*Synonyms:* Actea racemosa, and macrotyls.

Common Names: Blacksnake root, black cohosh, rattlesnake root, etc.

Botanical Description: Cimicifuga racemosa grows in shady woods and flowers from May to August, with many small white and regular flowers. The stem is from three to five feet long. The taste of the plant as growing is bitter, acrid, and to be of value in medicine it must be collected in the autumn and dried in the shade.

Crude Action: Massive doses of the drug up to the physiological limit are promptly followed by characteristic headache, generally frontal, flushed face, dizziness, tremor, slow pulse, fall of arterial pressure, these last being produced by the effect of macrotyls on the vaso-motor nerves and cerebral ganglia. The headache produced by the drug is peculiar in that it is of a tearing or bursting type. All these various symptoms soon disappear when the drug is discontinued.

Specific Indications for Use: Cimicifuga racemosa is one of the very best drugs we possess in the cure of rheumatic states. It is peculiarly indicated in deep-seated muscular pain which is very often seen associated with dragging pain in the uterus. For rheumatic neuralgia in the lumbo-sacral region and lumbago as well, it does its work rapidly and effectively. In gynaecologic practice cimicifuga has a wide and very important field of curative usefulness. Turning to dysmenorrhea, and to that type which is neuralgic essentially, we often see its action most admirably displayed. The remedy if given two or three days before the calculated monthly epoch and continued until the flow is over, will often tide over our patient very suitably. In amenorrhea cimicifuga is a valuable remedy. In those states of catamen suppression attended with bearing down, expulsive pains, with pain in the back radiating to the uterus, it is well indicated. In reflex headaches from the uterus, the drug is unequalled. It is useful in cases of scanty or retarded flow due to want of vitality of the uterus under which circumstances it stimulates the ovaries

and tubes as well as the uterus itself directly through the hypogastric plexus of the great sympathetic and strengthens the menstrual rhythm.

Provings of Cimicifuga: Medicine given for three weeks every two hours caused pains all through her lower limbs, something of the character of growing pains in young persons, only a great deal worse; complete loss of appetite, *backache*, in small of the back; fever every afternoon between twelve and four. Menses (usually very regular) delayed three weeks, coughs at night, and sleeps badly. *Legs mostly affected.* Heaviness in the lower extremities. Case 2. Given to a man every hour during the day for two weeks caused slightly bloody urine; urination frequent. Sick feeling in epigastrium accompanied with costiveness. Case 3. Relieved pains in abdomen and uterus, and distress about the heart, in a pregnant woman who had been suffering a long time. In the same case it also relieved a severe bearing-down sensation.

It was noticed that it suppressed menstruation in a certain number of females. All these provings were obtained with the higher dynamizations.

SIZE AND REPETITION OF THE DOSE.—The accurate solution of the size and most useful repetition of the homœopathic prescription has for years been a rather moot point in the minds of practitioners in our school. And it is touching on this point that Dr. R. Del Mas contributed a very interesting paper which was read at a late meeting of the Southern Homœopathic Medical Association in Atlanta, Georgia. As Dr. Del Mas sees it, drugs are in this world for the purpose of curing, and not for fostering, disease in man. Facts warrant the assertion that some practitioners are quite unmindful or even ignorant of the action of drugs on man himself. Such a one calls upon the cat, the dog, the rabbit, the mouse and the frog to tell him what strychnine or digitalis, or any other drug will do when administered to a sick man. Would he but employ his wits in surveys upon the ground where we physiologically detect the therapeutic limits of one and all drugs, he must learn more, in the line of pharmacology. Why not test on man the drugs to be given to man in sickness?

Claude Bernard discovered that the action of drugs upon the sick does not vary from their action when given to those in health. Hippocrates stated that what causes dysuria will cure it. Hahnemann proved that, according to the doses, a drug has two actions; one which is primary, to be followed by its direct opposite, a secondary manifestation. He relied merely upon experiments performed upon man, to convince him of this. The provings of drugs upon the human, in health, have established the homœopathic materia medica, which is but the panorama, or the graphic reproduction of the ills to which mankind is heir. Who of us at the bedside, has not found belladonna, lachesis, sulphur or arsenicum confronting us? Did we not recognize them before we had seen their pictures in the materia medica? If a patient present the counterpart of opium, and we give him large, or repeated doses of that drug, we shall aggravate his symptoms, but, if on the other hand, we use the attenuated or potentized dose we correct his troubles with opium. Hence we say: the potentized drug has the opposite effects of the crude one. The energy of any given disease expends its action upon the sick, and the sickened one answers to it, by reaction. This reaction of the individual, if greater than the action

of the dynamis of the disease, leads him back to health if weaker, the sick must die, and then the orderly vital force turns the bodily estate over to its conqueror. If the dynamis in mercurius is capable of developing in man a range of symptoms similar to those presented by the sick, then we say that the dynamis of mercurius and that afflicting the patient are similar in action, and that in the prover and in the sick, reaction is also similar. The potentized preparation, having properties diametrically opposed to those of the crude drug, it of necessity follows that those of the infinitesimal dose are similar to reaction arising from the life force, while those of the crude are similar to action arising from the disease-energy. Consequently Samuel Hahnemann was correct when he asserted:

"The fitness of a medicine in a given case of disease does not alone depend upon its accurate homoeopathic selection, but also upon the requisite and proper size or rather minuteness of the dose."

Furthermore, homœopathy's way of administering medicines is the only scientific, rational and successful mode of treating the sick, because the attenuated simillimum operates on reactive lines, parallel with life-force, whereas the crude dissimilar drugs "produce heterogeneous and dissimilar morbid conditions, which according to eternal laws can neither neutralize, annihilate nor cure each other." There is one thing, however, that the massive crude drug will do, and that is that it will "add to the old disease a new, dissimilar, artificial one of chronic character, thus doubling the hitherto simple case, which thereby becomes far more severe and intractable, nay, often quite incurable." Hahnemann has palpated all those facts through his power of accurate observation, and his noble figure stands above all in the gallery of celebrities, which commemorate medical history. One by one the paragraphs of his immortal Organon can be scientifically illustrated. In the recent utterance of that eminent Parisian, Dr. Francois Cartier, "Hahnemann foresaw, a century before others, the modern medical commotion. His faults and imperfections were due less to himself than to the conditions of scientific achievement of his time. He could not speak of antigens, antibodies, agglutinins or amboceptors. Why should the work of a genius whose greatest error was in outstripping his contemporaries be unrecognized?"

How small shall be the homœopathic dose? Hahnemann states: "The dose of a homœopathic remedy can scarcely be reduced to such a degree of minuteness as to make it powerless to overcome, and to completely cure, an analagous natural disease, of recent origin and undisturbed by injudicious treatment. We may, therefore, readily understand why a less minute dose of a suitable homœopathic medicine, an hour after its exhibition, may produce an appreciable homœopathic aggravation of this kind." It is, of course, difficult, definitely to state what potency of a drug should be administered, the aim of the prescriber being to select that which will produce improvement from the start. If the prescriber will only remember that he may not be so often tempted to use tinctures or some preparation that affects the sense of taste, to make the patient believe he is receiving something very strong, he will do well. Diseases are neither produced nor obliterated on material planes, and our practitioners should be cognizant of this when they prescribe, so that the results they produce be not

physiological but dynamical for "drugs cure through dynamism and not through their mass."

Proper also is that other injunction of Hahnemann that "in the treatment of disease, only one simple medicinal substance should be used at a time." Alternating remedies, and prescribing mixtures composed of several different medicines, are procedures that cannot be defended by any sensible argument, since no patient could ever reproduce several remedial figures at one time.

Concerning the repetition of the dose, it is frequently the mistake of the careless prescriber to give the required remedy too frequently. Especially is this true in chronic diseases where it is at times amusing to see how a nervous prescriber will sometimes repeat the same medicine, hoping to obtain rapid results. The harm would, after all, be less if he would discontinue when improvement begins (b) old symptoms reappear; (c) an aggravation begins. Possibly more cases are spoiled from repetition than from any other cause. In acute diseases, if the patient is strong and robust, we will repeat the dose until improvement or reaction sets in. In the case of chronic ailments if we remember that "perceptible and continued progress of improvement in an acute or chronic disease is a condition which, as long as it lasts, invariably counterindicates the repetition of any medicine whatever, because the beneficial effect which the medicine continues to exert is rapidly approaching its perfection. Under these circumstances every new dose of any medicine, even of the last one that proved beneficial, would disturb the process of recovery."

COFFEA CRUDA.—Acts as a stimulant to the whole nervous system, especially its reflex and psychic functions. It also acts directly upon the muscles, whose excitability and endurance are augmented. In experimental animals the heart beats are increased, both in rhythm and force, by direct action on the cardiac muscle, but this acceleration does not usually obtain in man. Here the inhibitory centre of the medulla is more markedly stimulated, sufficiently to counter balance the action of the drug on the myocardium, and a reduction of the pulse rate usually results, with increase in force of the systole. Palpitation may be experienced. The vasomotor centre is stimulated and the consequent contraction of the arteries raises the blood pressure. The temperature is increased in some cases. *Coffea cruda* is especially indicated in that class of neurasthenic patients who, from pleasurable emotions, suffer nervous over-activity and hyperaesthesia, *insomnia*, profuse urinary elimination, palpitation, high blood pressure, and cardiac hypertrophy.—Fritz C. Askenstedt, M. D., Louisville, Ky., *Medical Century*.

THE HAHNEMANNIAN MONTHLY.

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THE MEDICINE OF EXPERIENCE OF MOST VALUE.

BY

ELDRIDGE C. PRICE, M. D., BALTIMORE, MD.

(Read before the American Institute of Homœopathy, June, 1914.)

THE assertion is frequently made by the laity that the two dominant schools of medicine are gradually drawing closer together.

This assertion is not without some foundation in fact, and especially is it true in the treatment of surgical cases. In fact, there is little difference in the post operative medical treatment of the two schools. That famous old surgeon, Dr. Von Grauvogl, rarely failed to prescribe arnica after his operations, his belief being that arnica was the similimum of all wounded tissue. To-day the prescription of both schools is morphine. Occasionally the homœopathically educated surgeon will exhibit aconite, arnica, belladonna, staphisagria, calendula, or hamamelis, as the case may require, but the palliative is the dominant prescription. In special lines of work also the same similarity of procedure in the two schools is to be found.

I am not censuring this situation, but simply calling attention to its existence. In fact the progress in the restorative results of modern surgery renders adverse criticism of regnant methods most unwise, not to say unscientific, unless the critics have something better to offer. To be reasonable, therefore, we are compelled to recognize the fact that in general and special surgery, in the field of post-operative medical treatment, the dominant medical schools are working shoulder to shoulder.

In medicine, however, there is greater diversity; but even

in this field of so many bloodless battles, the average practitioners in the two great schools use many procedures in common. We find in their offices the same instruments of precision, generally, the same instruments of diagnosis, and the same apparatus for administering all kinds of mechanical treatment. At the bedside we find these men prescribing the same general regimen for the same purpose, and in some instances we find them outlining the same course of treatment—drugs and dosage inclusive—for example, in abnormal blood pressure, in the antitoxin treatment of diphtheria, in tuberculosis, etc.

Up to this point the layman can see little difference in these two classes of men, and critical examination compels us to admit that as a matter of fact the layman is right. But at this point we come to the place where the two ways are supposed to part. The “allopath” goes his way and with watchful eye meets critical conditions, crises, and emergencies as they arise, having no definite therapeutic guide, no principle of drug action upon which to base a prescription for the cure of the patient, shaping his course in accordance with the medicine of experience as expressed many times in journal articles and text book suggestions, the value of which he knows nothing. The “homœopath” goes his way, and while he, too, with watchful eye, holds himself in readiness to meet all vital and sudden pathological and symptomatic changes (and possibly with the same means used by his confreres), yet he administers what he should believe to be the drug that is homœopathic to the condition of the patient for the cure of the patient.

Here, then, is the difference between these two honest practitioners of medicine; one endeavors to cure his patient homœopathically, while at the same time he holds himself in readiness to take advantage of any reasonable procedure offered by modern medicine, that gives promise of aiding in the relief of his patient, and that will not militate against ultimate restoration to health; while the other knows nothing of, has no experience with, this therapeutic law, but trusts his case to expectancy, the method of therapeutic exigencies, alone.

With it all, however, the means used by the modern old school practitioner rarely injure the patient. This can not be said of the medical men who lived when Hahnemann wrote his *Organon*. Furthermore, the average “allopath” of to-day many times prescribes homœopathically. He does not use flux-

ion dilutions, but he uses minute doses of such drugs as aconite, belladonna, bryonia, ipecac, etc. Here again the two schools approximate.

On the whole the "allopathic" practitioner of to-day is far less to be censured than his grandfather of Hahnemann's time. A large contingent of the "homœopathic" school are recognizing this fact, and are no longer trying to apply, either to themselves or to the "allopath," the standards of a century ago. The world continues to move, conditions continuously and kaleidoscopically change, and it is no more possible to make the medical practitioners—of any school—of to-day conform to the standards of even fifty years ago, than it was possible to make Cullen, or Harvey, or Haller, or Hahnemann confess a belief in the pathology of Galen. Experience has taught them otherwise.

Even in the day of his advent, Hahnemann did not criticise for the sake of finding fault, or simply because he thought he could offer a better method than anything then in vogue, but he criticised because the regnant methods were positively harmful. At this time chaos and therapeutics were synonymous, but conditions are now so changed that we have not the same reason for adverse criticism of the present day unhomœopathic methods. There is more expectancy now practiced than excessive drugging, and had Hahnemann's advent been postponed to our day he would doubtless have raised different standards than those condemnatory ones so strenuously inculcated in his *Organon*.

There is to-day greater tolerance in all fields of thought than could have been imagined one hundred years ago, and the bitterness that animated the leaders of the past can not be indefinitely perpetuated. Even medicine with its reputed dogmatism must yield to the more peaceful and beneficent *zeitgeist* of the 20th century. To-day about the only attitude that thinkers will not tolerate is intolerance.

In the olden days the believer in homœopathy was expected to limit himself to the application of the principle of similars, and if he stepped aside to prescribe any other than the alleged homœopathically indicated remedy he was condemned, not only by his enemies but by the majority of his own school. By this straight-laced attitude of his brothers there is little doubt many hypocrites were made. Such bigotry was unscientific, abortive of all originality, and an insurmountable obstacle to progress.

This narrow policy forced the conformer to accept much unproved assertion as fact, and discouraged investigation and honest criticism. He was therefore offered the alleged experience of others as his guide, and all effort to gain wisdom from his own independent investigation discouraged. Hedged about within the narrow limits of such unprogressiveness homœopathy was in a fair way to be stunted and dwarfed into piteous insignificance. Fortunately for the good of the human race, however, there is an apparently blind influence at work for its continuous betterment, and from this beneficent advancement the medical profession is not excluded.

This broad march of progress is, it is to be hoped, not entirely a matter of chance, but is one of the results of liberty of thought, honest investigation, and declaration of the mature results of practical experimentation.

To the individual there is nothing worthy of implicit confidence that has not been proven in his own experience.

The neonatorum acquires definite, positive knowledge of the elementary laws of nature only through experimental use of his special senses. Whewell's Indian, or any denizen of the tropics may be familiar with the climatic influence of heat, but of the climatic characteristics of the frigid zone he not only has no perception, but of the solidified water of that zone he is a positive skeptic.

The evolution of primitive man up to his present state of culture has not removed the necessity for personal experience.

Specialists in many fields of science tell us that certain things are true. We have faith in these workers and accept what they say, but of our own experience we do not know them to be facts. It is only after we have put our beliefs to the practical test of experiment and proven their truth, that we *know*.

This is no less true in the field of therapeutics than in all other fields of art and of science. The therapeutic specialist is expert only in proportion to his experience. He may have full faith in the teachings of the master minds in his field, but until he has personally demonstrated the truth of his beliefs through experimentation the knowledge is not his.

This applied no less to the great Hippocrates than it does to you and me. He was a profound observer, and an accurate diagnostician within the limitations of his time, but his therapeutics may be regarded as a negligible item in the history of his achievements. He fully recognized this fact when, in

framing his natural history of diseases he emitted his famous lamentation: "Such are the causes, such the course, and such the termination, alas! of all the diseases of my day; but if you ask me how to cure them, then I must close my mouth,—I did my best, with the rough means at my disposal."

This was his *experience*. From actual observation he knew all there was to know of the diseases of his generation, and as certainly he knew from definite experimentation the powerlessness of regnant therapeutic methods to stay the ravages of these diseases. He therefore spoke with authority only of the things of which he knew from experience. He had implicit confidence in the therapeutic uselessness of drugs.

Another inductive philosopher, whose advent was more than two thousand years subsequent to the passing of Hippocrates, also recognized the necessity for experience as a foundation for reliable results; but unlike Hippocrates his experience inspired him with implicit confidence in the usefulness of drugs. In the early part of his medical career Hahnemann's mental state resembled that of the closing days of Hippocrates. From his experience he had lost confidence in drugs, and turned to chemistry and literature for something more satisfying, more trustworthy.

The translation of Cullen's Cinchona gave our German Hippocrates food for vigorous thought and astounding speculation. From speculation it was but a step to experimentation, and as a result of the experience gained from experimentation a definite working hypothesis was elaborated.

Up to this point, however, Hahnemann did not *know*. He suspected, he believed he was on the eve of great accomplishment. All that had gone before in the molding and development of his mentality was but preparatory to the work that was now before him. Up to this period in his life, his conclusions had all been the result of his experience, and his record as a profound inductive philosopher did not suffer in the next step in his evolution. That cinchona caused in the healthy conditions and details strikingly similar to the pathology it was known to cure, was not sufficient to furnish a guide for the therapeutic application of other drugs. Not only must cinchona be tested upon the healthy human organism, but the whole drug armamentarium must be subjected to the same trial.

Our experimenter did not hesitate. He entered upon his

stupendous task with full confidence in ultimate success, because each previous step in his progress had rested upon the solid ground of personal experience. Nor did the matter rest here. Not satisfied with a pathogenetic drug symptomatology, Hahnemann pressed on to the ultimate test of the validity of his suspicions; he applied the drugs that had made the healthy sick to heal the sick who were afflicted in like manner. And so intimate was his knowledge of natural diseases and of drug diseases, and so great his ability to fit the two together, that his working hypothesis emerged from the shadows of mere speculation and found its rightful place among the things of experience.

Henceforth Hahnemann healed the sick in the light of, and because of, his experience. He no longer followed the theories of the day, for he had a guide which experience had taught him he could trust.

As it was with Hippocrates and with Hahnemann, so it must be with every honest thinker. He knows truth as the only authority worthy of acceptance, and that the *ex cathedra dictum* par excellence is the dictum from experience issued to practical judgment. Furthermore, in this day of reasonableness and tolerance every conscientious man must acknowledge that his experience may not be the experience of other men, and other honest men will grant his right to be guided by an experience that may not be their experience. I may believe that to deny primary and secondary drug effects is but another form of denying the law of similars and of dissimilars, whereas you may think primary and secondary drug action has nothing to do with homœopathy, or *vice versa*. I may believe the indicated homœopathic remedy is all-sufficient in diphtheria, whereas you may be convinced that diphtheria anti-toxin is absolutely essential to a cure, or *vice versa*. I may have implicit confidence in fluxion dilutions, while you have no faith in them, or *vice versa*. Your belief on these points may be based upon your personal experience, just as my faith is based upon my personal experience, and we may both contend that experience of most value must be based upon an understanding of the law upon which it depends, and in good faith both believe we are qualified to hold our respective views. Because of this varied disagreement upon various questions, neither of us would be justified in censuring, ridiculing, or

ignoring the other; in fact there is no reason why we should not even live amicably on the same earth.

Of course there are many things which we must of necessity accept on faith, but these are not the things upon which the solid wisdom of the individual must rest. Like Hippocrates and Hahnemann we must each individually test the occurrences of life for ourselves, and from individual experience, guided by the laws governing these occurrences, gain our modicum of wisdom, which may ultimately be rejected at the hands of the world of working thinkers, or through repeated verification attain universal acceptance. This accepted experience may have its origin in the individual practitioners of one school or in those of another, but it is experience, and whether it be based upon the laws of physics with their varied therapeutic application, or pathogenetic drug effects with their various methods of use, it matters not, for all this mass of general experience may be utilized by the individual, by whatever sectarian preferences he may be dominated.

Back from prehistoric days, down the dark ages, through mediæval chaos into our own times, bearing the stamp of approval of the orthodox elect, comes that great paralyzer of independent effort and scientific progress, the crystallized medicine of experience; but the thinkers of to-day have attained that degree of emancipation that they will accept only the things consistent with demonstrable knowledge. They further recognize that the dictates of the consensus of opinion of the past may have nothing to do with the vitality of modern individual experience.

Speculation and plausible hypothesis do not offer a solid foundation for modern therapeutics. Vagaries and fine-spun imaginings may bear a tentative relation to great achievements in the making, but they have no part in the perfected achievement. It is difficult to attain perfection in medicine, for as long as there are no metres for human vitality, medicine may not be regarded as an exact science. As discouraging as this may be, yet by thorough methods of work we should endeavor to approximate the greatest possible precision. Precision in therapeutic work means successful prescribing, and from observation of things as they really are it may be discovered that all successful prescribers are not avowedly of the homœopathic school. This leads to the thought that every man is better adapted for some one position in life than any other—

if he can but find his niche. Every homœopathic practitioner, therefore, does not make a good prescriber, for there are a few on our side of the therapeutic fence whom it is safe to assume are not in the right niche. As Dr. Conrad Wesselhœft once said, "An expert *materia medicist* is like a fine violinist; very rare." It should not be considered surprising that some of our modern old school practitioners have greater therapeutic success than do some of the members of our own school. This does not in the least disparage homœopathy, but it does suggest that all un-homœopathic prescribers are not to be despised.

All of which is most suggestive of the correctness of the assumption of the laity, that the two great schools of medicine are drawing closer together. That this union will ultimately be accomplished it is quite reasonable to assume, but as to the way of it, the manner of its fulfilment, we may not be so clear.

The answer to the question of the medical experience of the most value, suggests a transitional situation looking to a solution of the unification problem. It may be assumed that the medical experience of most value to the world, including both the general profession and the laity, is that experience acquired from investigation, experimentation, application, and repeated verification of effective therapeutic methods, including the homœopathic method; all of which having been the honest work of individuals properly qualified for such accomplishment. Such work may in a general way be regarded as the synthetic product of most value to the world; while to the individual practitioner the wisdom acquired through his own work, regardless of his sectarian preferences, may be regarded as of most value to him individually.

Assuming this conclusion to be correct there is no reason why we should resent, or in any manner shrink from the idea of the coming together of the two dominant medical schools. Why should not all men who are educated to endeavor to heal the sick unite in one great brotherhood?

We should not permit the bar to unification to be raised by ourselves, we who believe we have the "leaven," that will leaven "the whole lump." We are continually consulting and being consulted by the older school practitioners, why then should we not welcome the day of tolerance, the day of harmony, the day of common sense? If our hereditary enemies are ready

and willing in this day of rapid changes and liberty of thought and orderly action, to honestly affiliate with us, why not?

Some may say this effort at unification is not sincere on the part of the "allopaths,"—meaning, possibly, that organized minority, the American Medical Association. This can easily be tested by asking that we be given the same rights and privileges that we are willing to give.

If both parties to the unification are earnest and sincere there is no reason why it should not be consummated. Such unification would mean the mutual recognition of the rights of each individual to think and to practice as his judgment dictates, and this would mean that the best wisdom from all general experience and from all individual experience would dominate the practice of medicine. It is only in this way that the greatest of all unifying culminations will ever be attained, which means the recognition of that which will be for the best good of the physician and of the patient, and which involves the acceptance, in accordance with the progressive and beneficent spirit of the times, of the fact that upon the keen observation, the logical conclusions, and the earnest work of the individual practitioner—regardless of sect—must rest the medicine of experience of most value.

INFANT FEEDING.

BY

JOS. PETTEE COBB, M. D., CHICAGO.

Dean of the Hahnemann Medical College of Chicago.

(Read before American Institute of Homœopathy, June, 1914.)

For several years in succession the chairman of this bureau has assigned me some topic in connection with Infant Feeding. I appreciate the compliment thus conveyed; no one for a moment ranks any other subject ahead of infant feeding in its importance, whether considered from the viewpoint of the baby, the economist, the physician or the pediatricist.

In my address before this bureau last year at Denver, I summarized the statistics of infantile mortality as follows: "There are born in these United States about two and one-half million babies each year; of this number about one-half a mil-

lion, or one-fifth of the whole number, died before they are a year old.

"One-fourth of all deaths from all causes are of infants during their first year of life; of these 60 per cent. are due to gastro-intestinal diseases, while at least 20 per cent. more have digestive disturbances as a contributory factor in their ill-health."

In other words, one-fifth of all deaths from all causes are of infants under one year of age, due to one preventable cause. No parallel to this frightful economic waste can be found anywhere, even in spendthrift America.

The deaths from tuberculosis, measles, scarlatina and diphtheria, at all ages combined do not equal in amount the mortality of infants under one year of age from this one cause.

Further comparisons could be made, but they would all point in the same direction.

Leaving for the moment the first year of life, can we point with pride to the methods employed in the average household in feeding children in the second and third year of life? The second summer is still dreaded by mothers; you know that this second summer morbidity is largely due to improper feeding, that if the resistance of the child in the second year were as low as during the first year, the mortality would be higher than during the first year; the weaklings have gone, the others have developed resistance and can endure more abuse.

There is no lack of educational opportunities to-day for either the profession or for the laity; but neither the profession nor the laity have been generally roused to the importance of systematic feeding for the second and third year of life; federal administration of the pure food law, educational efforts by conservation associations, and municipal efforts in the providing of good milk, either at cost or free, are the most hopeful agencies that have been aroused as a result of the last 25 years work by the leaders in our profession on this subject of infant feeding.

It is easily seen, however, that these agencies at present only touch the borders of humanity and that the great mass are still dependent upon the instructions of physicians and nurses and the mothers of the preceding generation.

It is right, therefore, that this subject of infant feeding, covering both of the first two years of life, should have a prominent place in our deliberations until far better results have been

obtained. The real proof of the value of all of our work is the ultimate result obtained, viz., infant mortality.

I feel like recapitulating briefly some of the points which I made last year, in discussing "the errors in modern infant feeding."

First, the greatest error in infant feeding to-day is the lack of attention and study given to maternal feeding, by the physician directly in charge of the baby.

Second, some of the errors that are still common may be enumerated as follows: Irregularity of feeding; a lack of real knowledge of the baby's food supply; ill advised weaning; a lack of appreciation of the value of mother's milk, even in small amounts; the routine cathartic during the early days of infancy; a misunderstanding of the value of meconium, and the unnecessary and vicious scouring out of the baby's mouth.

All of these points we discussed last year, but they are of sufficient importance to warrant calling your attention to them again. My warrant for making this statement is the fact that statistics show that the breast fed baby has about nine times as many chances for life as the baby artificially fed.

To everyone who has followed the trend of thought in artificial feeding of infants, it must be evident that there is a marked tendency to swing back from all of the fads and fancies, which have been developing during the last few years, to the more normal standards of approximating as nearly as possible the food that babies were intended to live upon.

Special proprietary foods, except in so far as they are milk modifiers, are not highly recommended. Fat free milks are recognized as not the proper food for all babies, but only advisable in certain instances for comparatively short periods. Special preparations of milk, that have been desiccated, pulverized and re-dissolved, are no longer considered by any large number of men the essential food for all of their babies.

Fortifying milk with egg albumen, beef extracts and other substances foreign to mother's milk is not so common a practice as a few years ago.

The principles of artificial feeding during the first nine months of life, that obtain most general approval to-day, may be summarized as follows: Gradual weaning when possible; fresh cows' milk as the basis of infants' foods; absolute cleanliness when possible—when impossible pasteurization or sterilization, not to cover up dirt but for the purpose of destroying

germ life; the use of an easily digested sugar in the modification of milk.

I still contend that milk sugar, if pure and used in proper proportions, is the best sugar to use in milk modification. I recognize the fact that the commercial milk sugar is a very inferior product and not devoid of danger; that the improper use of milk sugar may be productive of serious harm, and that if the sugar content of a modified milk is to be prescribed in any loose or general way, it is safer to use cane sugar or malt sugar than sugar of milk.

Modern experiments have demonstrated that malt sugar is more easily taken care of by the infantile organism than is cane sugar, and that its use is devoid of some of the undesirable cane sugar faults. There are a variety of malt preparations on the market, some made from cereals, some made from potatoes, and probably some made from other types of starch. Some malt preparations are fortified with other extracts, which do not add to their food value for infant feeding. Many malt preparations have egg albumen, milk proteids, or some other food in their make-up.

To my mind the addition of these dry proteid preparations, no matter how finely divided they may be, are inferior in value, for the average healthy infant, to the proteids in fresh cows' milk.

In writing a prescription for modifying milk, either for the laboratory, for the hospital diet kitchen or for home preparation, there should be the same knowledge, care and accuracy as in writing a prescription for the administration of medicines. The physician should know what proportions he is trying to make, and he should know the actual content of his prescription when made according to his directions.

This is the criticism that I would make of the average general practitioners' prescription of food for an individual infant, viz., that however carefully he may individualize his child, and individualize the remedy which he prescribes for that child, when showing symptoms of illness, when it comes to prescribing its food he generalizes viciously with little knowledge of the end result of his prescription.

This failing is more reprehensible with us than with other physicians, because we profess to individualize our patients; and condemn routine work.

Another point which I wish briefly to state is that we have

no right to discount the baby's future for his or his attendants' present comfort. His food must not only be easily digested by him, but it must supply his economic demands; weight is only one index of growth and not necessarily the most important one. There must be a harmonious growth of all tissues and organs; there must be a gradual development of the organs of digestion for more and new work; unconverted starch is not a desirable food for babies under six months of age; neither is malted starch a complete carbo-hydrate food principle for older babies; cereal waters as milk diluents after the first five or six months are excellent educators for pancreatic activity.

All changes in the infant's dietary regimen should be gradual; new articles of food should be added one at a time—in small amounts and only when the digestive organs have reached the physiological development which warrants their use.

NEW VARIATIONS ON AN OLD THEME.

BY

O. S. HAINES, M. D., PHILADELPHIA.

(Read before the American Institute of Homœopathy, June, 1914.)

It will always be true that some of the criticism of the medical college curriculum will turn out to be not criticism at all, but something else. Because criticism is based upon examination, upon analysis, upon an ability to establish a true standard of comparison. It has often occurred to me, that if some of the critical alumni of our various colleges could only spend half a day within the walls of their alma mater in the company of some of the eager, enthusiastic teachers and laboratory men that I could name, and be shown around, much of their censure would be changed to songs of praise. They would go to their homes, realizing that a modern medical course is a wonderful thing to-day—more wonderful than ever before—better than ever before. I have done this and I know.

And it is also to me a very wonderful thing that the men who conduct these modern medical schools can be so eager and enthusiastic and indefatigable when so much of the work of running a college is downright drudgery.

The average alumnus of ten years standing has little idea of

the intensity of the modern medical course. What might I not say of the alumnus of twenty or thirty years standing? He surely would not understand what it means to fit the modern student of medicine to take his place among the men of originality and initiative in a coming generation, which must of necessity be very different from the generation which has almost finished its work and passed into history. I say he could not understand, unless he came and saw; and this he does not do. Yet the doors of his alma mater are always open and a warm welcome awaits him. The alumni love their alma mater, of course, but they should come and see her once in a while and tell her so.

The teaching of homœopathy and the homœopathic materia medica in a homœopathic medical school, has never been one of the easy jobs. Upon the shoulders of the teachers in this department in every college, has been laid much of the blame for those changes, substitutions and alterations that are said to be so apparent in the therapeutic technique of some of the modern homœopathic alumni. So that when it is said "the practice of homœopathy to-day is not what it once was," you instinctively turn your gaze upon the man who is teaching it, as if there or thereabouts might be found its explanation.

But that statement is wrong, and you are wrong in the direction in which you are looking for its explanation. The practice of homœopathy is the same to-day as it was in the past; as it must be in the future. The selection of a remedial agent according to the index of similarity is a fixed, not a variable, procedure. If we had before us the complete statistics of that noble army of medical men throughout the world, who rejoice in the title—"practitioner of homœopathy"—we should not find that many of them had forsaken the rules laid down by Hahnemann in his *Organon*. Because both instinct and reason compel the conclusion that if we are to get uniform results, we must follow a fixed and uniform method.

I am quite willing to admit the defections of a certain proportion of the graduates of our colleges, especially in these modern times, but I resent every imputation of irregularity that has been made against the modern teachers of homœopathy, or against those men who are really practitioners of homœopathy.

The therapeutic defections to which we have referred may be classified, I think, under two headings:

I. Some few of our graduates, after receiving their diplomas, simply decline to practice homœopathy. They practice medicine according to a system entirely their own. No one could understand it, no school of therapeutics would admit that it was even rational.

II. Some few of our graduates finish their medical education upon the day of their graduation. They never advance. Within a comparatively short time their knowledge of homœopathy and homœopathic technique fade, just as their knowledge of anatomy fades; and soon they have no correct technique, and make a good homœopathic prescription about as easily as they would operate for bowel obstruction.

It is my opinion that neither the teachers of homœopathy nor any alma mater should assume responsibility for either of these two classes of homœopathic defectives. Neither should they be instanced as examples of the output of the homœopathic colleges. They are but by-products, and the greater part of the blame for their defection should be laid upon them individually.

Responsibility is measured by the opportunities which people have had of knowing better. Homœopathy is very thoroughly and carefully taught in the modern homœopathic college. The philosophy, the organon, the technique of remedy selection, the materia medica, so that when a student graduates, he knows how to practice it. If he elects to become a practitioner of homœopathy, he has a good foundation upon which to build by further study and investigation.

I think that you will all agree that the graduate in medicine is by no means a finished product in any department of medical science. We do not graduate finished surgeons, finished ophthalmologists; neither do we graduate masters of the homœopathic art. Perfection in any specialty is a matter of extraordinary cultivation, of growth, of progress, and this means continuous study and continuous work. Now, homœopathy is essentially a specialty. Any one who knows what splendid general courses our colleges are giving to-day, who realizes how many well equipped graduates are sent out each year to become practitioners of homœopathy in every sense worthy of that title, who knows how hard the men conducting our colleges are striving for perfection in the curriculum, will hesitate to criticise. Therefore what follows is offered as

something stimulative to thought or reflection, rather than a criticism of existing conditions.

The student of medicine within our homœopathic colleges needs and should get *plenty* of ocular proof that the things taught him by the teachers of homœopathy are true. He should be impressed by demonstration, that the *similimum* cures. Not that it may, might or will cure—but that it does cure. He should get this proof daily, in every department of the homœopathic college and in large amounts. That is the reason so many of our graduates are fired with the desire to become great surgeons. They constantly see the brilliant operation and what it does accomplish. Let them see the brilliant homœopathic prescription just as often, and what it does accomplish.

The very atmosphere of every homœopathic college should be everywhere “a homœopathic atmosphere.” Man is largely the product of association and environment, therefore the atmosphere and surroundings of the student in our colleges should be such as will make for an abiding faith in the homœopathic doctrine, and an intense desire to become a master in the practice of the homœopathic art. When I say that no living teacher of homœopathy, in a homœopathic college, can accomplish these things *alone*, I state a fact. They will require a concerted movement in every separate department of the colleges, with a specific definite purpose in view—the perpetuation of homœopathy by the production of a very substantial and durable type of homœopathic practitioner, and a lessening of the output of by-products. The expenses of such innovations as these would be very largely covered by concerted inclination and effort.

HOMOEOPATHY ON THE FIRING LINE.

BY

WM. A. BOIES, M. D., KNOXVILLE, TENN.

(Read before the American Institute of Homœopathy, June, 1914.)

In selecting this topic for a paper, I wish to lay special stress upon the fact that the homœopathic profession does not take a back seat in the advances which have been and are being made all along the line of medical and surgical research.

When we accept the definition of a homœopathic physician as one who adds to his knowledge of medicine a special knowledge of homœopathic therapeutics, we retain an inborn right and liberty to use in the interests of our patients, all medical knowledge, to employ any known measure in the curative realm as our judgment may dictate. Homœopathy pertains only to the use of drugs as a therapeutic measure. Other measures utilized in combating disease as surgery, hygiene, diet, heat, cold, electricity and mechanical measures are the instruments of medical men, regardless of school.

We sometimes hear the query, why are the homœopaths not more progressive? Why are their names not more prominent in connection with the so-called fads and innovations in the medical world? We might as well ask the question, why is the law of gravitation not changed and varied to suit the times. The law of similars is just as true to-day as it was a hundred years ago and its application is productive of the same gratifying results. We might just as well change the seasons or the revolution of the earth around the sun. Truth is truth as God is God, and truth the day will win.

Did it ever occur to you, ladies and gentlemen, that nearly all the so-called advancements in medicine of recent years have been made along homœopathic lines? Take the serums over which the dear suffering laity and many physicians are going crazy, are they not a stagger in the dark at *similia similibus curentur*? I saw not long ago an item in an allopathic publication to the effect that a remarkable remedy had been discovered for the cure of hemorrhoids, that Aesculus was destined to become a boon to suffering humanity. An old school man wrote not long ago that he was getting better results in pneumonia than formerly and that bryonia, phosphorus, tartar emetic and veratrum viride were his sheet anchors in the treatment of this distressing disease. Some are anxious to be stung by the honey bee for the relief of rheumatism. Illustrations along this line could be multiplied ad infinitum, but suffice it to say that we can see the tendency of the times.

Men will scorn a potency and yet run like a scared rabbit from a bacillus.

What I wish to impress upon your minds in this brief paper is that *SIMILIA SIMILIBUS CURENTUR*. is the guiding star in medicine to-day, and the goal for which men and

women are striving in ignorance of the law of similars, and it is a pathetic fact; but a fact nevertheless.

The wideawake homœopath is up to date all along the line. His eyes are open to anything good in the medical or surgical world, but as yet nothing has been found to supplant the grand old law of similars and I predict the day not far distant, when the banner of homœopathy will float from sea to sea and pole to pole, and when the eyes of the suffering grow dim and the steps feeble and the brow feverish, through the clouded vision of pain, they will look to the unchangeable law and will be able to mount up with wings as eagles, will run and not be weary, will walk and not faint.

God bless the memory of Samuel Hahnemann, who gave the world so much!

DIAGNOSIS OF PULMONARY TUBERCULOSIS FROM SYMPTOMS AND PHYSICAL SIGNS.

BY

WALTER SANDS MILLS, A. B., M. D.

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(Read before the American Institute of Homœopathy, June 30, 1914.)

WHAT I have to offer is nothing new; I merely wish to call attention to and to emphasize the fact that a vast number of cases of pulmonary tuberculosis reach an advanced stage before they are recognized as such. Some few, perhaps, are not recognized through lack of skill on the part of the physician; the majority, however, are overlooked through neglect or carelessness in the physical examination.

Some of the early symptoms are lack of the usual endurance. The patient does not feel quite up to the mark. He complains of slight shortness of breath on exertion. He tires easily. Sometimes he complains of feeling slightly feverish in the late afternoon or early evening.

If these symptoms are troublesome enough to send the patient to the physician, careful questioning may elicit the fact that the patient sometimes raises a little expectoration in the morning, with or without a slight cough. The doctor may take the pulse and find it slightly accelerated. He may take

the temperature and find it 99 or more. Very often such a patient is told that he has "a touch of malaria," is given a prescription, and sent on his way. No chest examination is made. But the indefinite symptoms continue, and when the chest examination is made the case is far along.

Unless the cause for symptoms like the above is obviously in some other part of the body, I believe the chest should be examined, not perfunctorily, but carefully. It makes no difference how many chests one has examined, each new one gone over adds something to one's experience. If the heart and lungs are normal, so much the better. The average physician would be much better qualified to pass on abnormal physical signs if he seized every opportunity that presented to examine normal chests.

Probably the earliest single symptom of pulmonary tuberculosis is a slightly increased pulse rate when the patient is up and about. A pulse of 85 or more at such times is a very suspicious sign. A slow pulse is a good sign. I do not believe pulmonary tuberculosis is ever present with a slow pulse rate when the patient is out of bed.

The next most important symptom is an increase of temperature every afternoon. It may not be more than 99, but if it occurs regularly every day for any length of time it is very suspicious. Emphasis is sometimes laid on a subnormal morning temperature. That means nothing. It is the afternoon rise that counts. If such a patient is a woman and the temperature is recorded every day for weeks, there will be found an increased rise during the menstrual period. If the temperatures are charted over several months the curve will show the periods. I am speaking now of early cases. The menses cease in far advanced tuberculosis, but by that time the diagnosis will be self evident.

With symptoms like the above a chest examination is imperative. Tuberculosis is no respecter of persons, and there is no typical appearance of symmetry or pulchritude in persons affected. They may be tall or short, fat or thin, beautiful or otherwise. They may be old or young, good or bad. There may or there may not have been other cases in the family. All of these things may be of interest, and in a long series of cases may have some value. But for one single case they have no value whatsoever. The diagnosis must be made on the physical findings in the case examined, and on those alone.

The first requisite in examining the chest is to have the patient strip to the waist.

Inspection: There is no typical phthisical chest. Late in the disease, patients gradually wasting away with pulmonary tuberculosis have a characteristic appearance, yes; but early in the disease, no. A man may have the chest of an athlete, a woman the chest and bust of a Venus, and yet have tuberculosis of the lungs.

What we want to observe on inspection is the respiratory movement, its frequency and its symmetry. In early cases there is a slight increase in frequency. The affected side will show either a slight lagging behind the other, or it will not make quite so large an excursion as the other. In other words, the motion on the affected side will be slightly restricted.

Palpation: By placing the hands on corresponding sides of the chest, going carefully over the whole surface front and back, the restricted motion of the affected side may sometimes be felt when it cannot be seen. After the chest has been carefully palpated with the patient breathing quietly, then test for vocal fremitus by having him say "ninety-nine." If there is any consolidation increased fremitus will be felt over the affected area. It must not be forgotten that normally vibration on the right side is always a little more marked than on the left. If the two sides feel alike there is probably some trouble in the left.

Percussion: This should be done gently, carefully comparing similar areas on the two sides, and thoroughly. There will be a slight dullness over consolidated lung tissue. A very important area to percuss in early cases is over the apices at the root of the neck, Kernig's sign. The normal lung will give a resonant width of two inches or more, depending on the size and lung capacity of the individual. In pulmonary tuberculosis there is a decided narrowing of this area on the affected side.

Auscultation: In listening for abnormal breathing sounds, the same care and thoroughness must be observed as in palpation and percussion, comparing similar areas on the two sides. Again it must be remembered that the sounds in the right lung are more pronounced than in the left.

The earliest change that takes place in the breathing sounds in tuberculosis of the lungs is a slightly prolonged expiratory murmur. This is heard best above the scapulae at the back.

In case of infiltration at the apex if the patient whispers "ninety-nine," the sound will be distinctly heard through the stethoscope. If the lung is normal the words will not sound distinct. This is a very early sign.

Rales, fine crackling or bubbling sounds, appear first just under the clavicles near the sternum in front, in the armpits at the sides, and above the scapulæ at the back. In involvement of the entire lobe they will be heard all over it. But the areas noted above are where the first rales appear.

In listening for rales have the patient breathe naturally first. Then ask him to breathe a little faster and deeper with the lips open as though slightly out of breath. This will frequently bring out abnormal sounds not heard at first. If still in doubt have the patient cough and then take a deep breath according to the method first suggested by Dr. Garvin, of the New York State Hospital for Incipient Tuberculosis, at Ray Brook. This method will sometimes produce rales where other methods fail.

In a well developed case, of course, rales can be heard with the ordinary breathing sounds.

When examining the chest do not overlook the heart. If the heart is otherwise normal, and the patient has pulmonary tuberculosis, there will be heard an accentuated second sound over the region of the pulmonary valve. I have found this to be an extremely important early sign of tuberculosis.

The frequency of the heart beat will be increased. As noted above, if the heart beat is slow, pulmonary tuberculosis does not exist.

There is no one of the above signs that is pathognomonic, but a combination of them makes a diagnosis of pulmonary tuberculosis certain.

I have said nothing about the X-ray because I do not believe it possible for a tubercular lesion of the lungs to show in a plate, that cannot be detected by careful physical examination. I have said nothing about the tubercle bacillus because frequently the physical signs are certain before the bacillus can be found. I would not hesitate to make a diagnosis of pulmonary tuberculosis on physical signs in spite of negative reports from the laboratory.

This paper would not be complete if I did not refer to some of the mistakes I have seen made through carelessness or neglect. I have known of many cases of tuberculosis to be treated for malaria until too late to help them. The general symp-

toms were malaise and fever and the chest was not examined until too late to be of any benefit.

I was called in consultation once to see a case of typhoid fever that was not progressing satisfactorily. The patient had a cough that was attributed to the bronchitis that so often accompanies typhoid. Physical examination showed the case to be pulmonary tuberculosis and nothing else. This was carelessness. The regular attendant was quite as well qualified as I was to make a correct diagnosis.

I had a patient with chronic heart, kidney and liver lesions who also had an associated bronchitis. A number of physicians in each of three hospitals where he was at various times diagnosed tuberculosis. There was no evidence of consolidation in the lungs. I had the satisfaction at the autopsy of proving there was no sign of tuberculosis.

There is one condition where the physical signs may be exactly like those of pulmonary tuberculosis at the height of the disease; I refer to pneumonia of an upper lobe of the lungs. The history of the case will correct the error, and if all goes well the lung will clear up in a few days.

There is no trick about diagnosing pulmonary tuberculosis, all it needs is care in examining the chest. The only paraphernalia necessary are your eyes, ears and hands. A stethoscope is a convenience and that can be carried in the pocket.

THE POSITION OF THE STOMACH IN CHILDREN.—Jas. Warren Sever, M. D., of Boston, Mass., in a paper on "The Position of the Stomach in Children," published in the *Archives of Pediatrics*, January, 1914, found by an examination of 83 children (60 girls and 23 boys, average age 10 years) that, taking the crests of the ilia as landmarks, 25 showed the lower border of the stomach opposite the fourth lumbar vertebra, 9 showed it at the level of the crests and in 49 the lower border was well below the crests, often as much as 3 or 4 inches. From these findings in such a large number of cases, he believes that in the future the second lumbar vertebra will have to be discarded as the normal landmark of the lower border of the stomach. In the study of the X-ray plates, he was much impressed by the size and shape of the stomachs, as well as their low position. The most persistent type was that of the sink-drain variety and they were generally larger than what is usually considered the normal size. There were very few stomachs presenting the so-called normal "cows'-horn" shape and none of these were in the position usually regarded as normal.

He therefore concludes that by this study he believes that the child's stomach is lower than we generally supposed and that to find a stomach low in a child does not necessarily mean that there is a pathological ptosis.

SEX HYGIENE; SEX EDUCATION; EUGENICS. A PROTEST.**BY****J. RICHEY HORNER, A. M., M. D., CLEVELAND, OHIO.**

(Read before the meeting of the American Institute of Homœopathy, Atlantic City, N. J., July 2, 1914.)

If there is any one word which tells of the aim of the director of a business to-day, it is the word efficiency. This must be taken in its largest sense, involving not merely the amount of production but the amount in relation to the expenditure of time, energy and money required. Nothing is gained if there is a large production and an increase of expenditure out of proportion to the gain. The day of generalities in the estimate of results is long past. In order to get a standing one must be able to prove efficiency in definite results which may be tabulated and if need be must be permanent. The mill producing steel rails does not report to the office simply that a large number of rails had been made during the day. The report must be in detail, giving many technical particulars which in turn are tabulated and recorded for future reference.

Without desiring to inject into this paper any discussion of religious matters, a conclusion has been reached by many persons that the work of one of our most prominent evangelists has not reached the requirements of the present day standard of efficiency. This is because there is a large disproportion between the permanent results obtained and the enormous expenditure of money, to say nothing of the time and energy consumed. If the same amount of each of these three elements, backed by a similar enthusiasm of workers and listeners were expended in individual efforts the results would be greater, more productive and more permanent.

The question of sex education and sex hygiene is really as old as is the question of education and hygiene along any line. The development of a desire for knowledge dates back many centuries. The real building-up of the world is coincident with the development of facilities for satisfying the demand for education. The teaching of physiology is a part of that education as is also the teaching of biology and all processes of life generation and progress.

As a matter of fact it is conceded by all that to some extent

at least, sex education is just as necessary as is sex hygiene. The only questions with which I am to deal are the questions as to the proper methods to be pursued, the time when it is to be taught and the place where the best results may be obtained.

We answer this question, by individual instruction, to the child before reaching the age of nine, and in the home.

The operator of a machine shop or a mill does not take a group of apprentices to a hall and give them lectures dealing with the work he will expect them to do. He places each one under the care of an experienced hand in the shop and all thus get individual instruction. In our colleges and universities there is not to-day nearly so much work done in the class room before the students in a body. As a result of the advances which education is making, there is more and more a tendency to cut down the number of students in a class so that there may be an approach to instruction to the individual. If for no other reason than that knowledge can be better imparted, should the method of sex teaching follow the trend of present day developments.

The time to begin the building up of character and of self-restraint is after the foundation for such a structure is laid. The boy or girl who has reached puberty without this foundation is not going to be helped by lectures or instruction given in a crowded schoolroom.

The infant can be taught to obey and this is the first step toward full manhood and womanhood. The first lessons must be given in the cradle. Thus you develop self-control and the first point is gained. The next step is to impress upon the child the reason for obedience. While the child will soon learn whom it must obey, this is of less importance than realization of the fact that obedience is expected.

The next step is the development of respect. This will follow closely upon the habit of obedience. As a matter of fact respect for those to whom obedience is due, makes that obedience a pleasure as well as a duty. An important point is that parents should keep in mind that they are under a constant observance and they should so live as to engender in their children the fullest respect and confidence. If a child does hold its mother in this respect it will hold other women likewise. It is an easy step from respect for the mother to respect for the woman. Here is the beginning of the protection of girlhood and womanhood. Give the boy and girl this

care and attention and you will, long before they are nine years old, have built your foundation and upon this you will be ready to build the superstructure of information as to sex life.

While we do most earnestly believe that the home is the ideal place for this education, it is certain that the teacher in the public school has a mission to perform. It is the teacher who must handle the thousands of children who come from homes where this foundation is not and cannot be built. But we contend that the instruction can and should be given to the individual and not to the class as a whole.

I have thus outlined the position I take in the whole matter of sex education. I believe that we need go no further than this and that the plan provides not only for this generation, the young people of to-day, but for those who are to follow. To me it seems a very simple question, one which does not need the excess of discussion and publicity which has been given it. The American people have always had a great tendency to go to extremes in anything they undertake in the way of reform and their attitude in this matter has been no exception to the general rule.

It is just as true in regard to what has been said and written and done in the other great question which has recently occupied so much space in our magazines and daily papers, the question of betterment of the human race which has given rise to the new science of eugenics. To the writer it seems that the promoters, if we may call them so, are so enthusiastic as to the possible results that they have lost sight of the fact that these results can come only through education and that education takes time. It is certainly not a question of legislation. Legislation never has controlled and never will control the morals of the individual. Certainly in this question legislation in order to be effective must be universal. It is, of course, a start to have the laws of Wisconsin declare for the eugenic principle, but they are not and cannot be effective unless the laws of Illinois do likewise. It is a question in this country which if the subject of any legislation at all must be made the subject of national laws.

Nor will the mere passing of a law count for a great deal. The people must be educated up to the willing acceptance of that law. The question as to how far the law should go is to our mind very easily answered. It should go only so far as

to determine that there is no reasonable doubt of the health of the woman and the man. A detailed study of heredity is impracticable and useless. The man who is in love with a woman will not allow any obstacle as doubtful as possible effects of heredity to stand in the way of marriage. The woman who loves a man will do pretty much as he says. She will follow the love which has been aroused by her almost unfailing intuition. That will be her guide. She does not decide by rule. When the head and the heart disagree, the heart wins every time. That is truly sometimes the tragedy of love. Still there is no real marriage without love. Mere mating savors too much of the animal.

As a matter of fact, man-made laws are going to have but little to do with the success of eugenics, for it will eventually be a success. Woman herself is going to be the chief positive force. The woman of to-day is something different from the woman of yesterday. She in recent years has come to a fuller sense of her function in society. She has developed a keen sense of human values and with her born interest in children she has become the logical force in eugenics.

Eugenics and education must go hand in hand. The one is certainly complementary to the other. Eugenics has for its object the raising of racial qualities and standards, while education deals with the expression or consummation of these standards. It is through education that we must raise the standard of man. It is absolutely impossible to make eugenic laws work where the people are not educated to a belief in their necessity. Until the people see the value of positive, constructive eugenics the science cannot be successful. As education continues and the public becomes more and more familiar with the consequences of marriage of persons who are unfit, the health of the prospective husband or wife will exert a more and more powerful influence and love will move within a narrower range with reason moving within the wider. Thus will it be seen that the influence represented by the word will grow increasingly powerful not by the making of laws, but by the spread of popular education.

A very important element in making eugenics effective is that there shall be a willingness on the part of those concerned, and another is the question as to the ability of the examiner to make a just and unbiased decision. If the parties who desire to marry are not willing to be bound by the results of the ex-

amination, the law will be ineffective. It is not within the positive power of any one man or woman to absolutely prevent deceit. It goes without saying that two people desiring to marry and not being in sympathy with the eugenic idea will voluntarily or involuntarily conceal such points in their history as they think will have a tendency to prevent the granting of a certificate. The examiner must, therefore, make his final decision upon insufficient data. It can thus be very easily an unjust decision.

There is an idea in the following, which I quote verbatim: "There were certain nations which destroyed those whom they deemed unfit. These nations either have ceased to exist or are no longer a factor in the world, which proves that the idea did not work out. Why did it not work out? Simply because these nations were violating a great law of nature. One of nature's universal laws is that all her efforts are toward the betterment of life. If this question were left to nature herself, she would solve the problem for the future as she has solved it in the past and is solving it to-day. Nature always avoids that which gives pain and discomfort. She always accepts those things which give pleasure and freedom and help in development."

A Massachusetts State Commissioner recently made a statement in which there is a great deal of truth. So long as men are attracted by beauty and women by strength, there is no need to be alarmed for the future. Men like in women what is most womanly. Women like in men what is most manly. We all know exactly what that means and it will always be thus. It cannot be changed any more than woman can take on men's forms and man can take on woman's forms.

The young man will seek the maid for all time to come just as he has done since the beginning of the race. If he is the right one, she will be glad and in the time after, all her civic rights and her personal rights, whether she claims them or not, will have no effect upon her wifehood and her motherhood, nor upon the devotion of her husband. Less eugenics and more old-fashioned love is what the race needs. When love is the prime factor in marriage, eugenics will take care of itself.

**BINET AND SIMON METHOD OF MEASURING THE DEVELOPMENT OF
THE INTELLIGENCE OF YOUNG CHILDREN.**

BY

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(Read before the Homœopathic Medical Society of the State of Pennsylvania, September, 1913.)

HERETOFORE in all of the great efforts to aid mental defectives, philanthropists and sentimentalists deserve the most credit. Unfortunately, however, they have been greatly handicapped, and much of their efforts in vain, because they did not know, nor had they any creditable way of finding out the mental stock of the child.

As physicians diagnose their cases before instituting treatment, so it is necessary to learn the mental status of the child before attempting to help him.

This is just where the Binet-Simon tests are of such great importance, and this is verified by the fact that in many if not all the largest institutions of this character—on the Continent—England and United States use either the same tests or modifications of them. Drs. Town, of Illinois, and Goddard, of New Jersey, have not only been the pioneers but (doubtless) the most successful in this country.

It is a comparatively simple matter to measure the physical capability or fatigue, with or without stimulation. To measure the mental development with its complexities and peculiar obscurities presents a very difficult and not altogether satisfactory proposition.

However, that a *Norm.* or unit of measurement is recognized for the average normal children at various ages, is a great step—and the backward as well as the precocious child may get a fairly definite age rating.

In 1904, Paris passed an educational measure requiring mentally defective children to have individual mental tests.

As there was no accurate method, Binet and Simon decided to standardize their scale of tests. They first selected pedagogically average school children, ten each from the ages from 3 to 7 and 15 each from the ages 7 to 12. From these and previous records they worked out age groups.

Their first scale of results was published in 1905. (After a tremendous amount of work and study their final revision

appeared in 1911 in *L'Anni Psychologique* and in the *Bulletin de la Societe libre pour l'etude psychologique de la Enfant*).

In a short article one only attempts in a general way to give an idea of what the Binet-Simon tests are.

Let me assure you, however, that the more one studies and actually works with the tests, the more he is satisfied that they are of great value.

There is only one complete and accurate translation. Most of them are translations merely in parts or with modifications. In the course we took at the University of Pennsylvania we followed the translation of Clara Harrison Town, Ph. D., formerly consulting psychologist at the Franklin Asylum, Philadelphia, now of the Department of Clinical Psychology, Lincoln State School and Colony, Lincoln, Ill.

As you will readily observe, these tests present a wide range of opportunity for exercising the various faculties of the child. The power or ability of,

Co-ordination.

Attention.

Comprehension.

Memory, visual, auditory and kinæsthetic.

Aesthetic sense.

Artistic tendency.

Observation.

Ingenuity.

General information.

I shall hurriedly run over the tests, but time will not permit full descriptions and explanations. All of the factors of shyness, obtuseness, slowness, stubbornness, mental apathy, trickiness, precocity, family environment, racial tendencies, emotional strain and emotional influence have to be most carefully considered, and treated with the most faithful fairness.

3 years:—

Shows nose, eyes and mouth.

Repeats two digits (3-7, 6-4, 5-8).

Enumerates objects in picture.

Gives family name.

Repeats sentence of six syllables (I am cold and hungry).

4 years:—

Gives own sex.

Names key, knife and penny.

Repeats three digits (4-9-2, 3-7-4, 5-8-1).

Compares two lines (Which is the longer).

5 years:—

Compares two weights (Which is the heavier).

Copies a square (Pen and ink).

Repeats sentence of ten syllables (My name is John and I am the youngest).

Counts four pennies.

Game of patience.

6 years:—

Morning and afternoon.

Defines in terms of use (fork, chain, knife, horse, table, Mama).

Copies a lozenge.

Counts 13 pennies.

Compares faces aesthetically (Fig. 6).

7 years:—

Right hand, left ear.

Describes a picture.

Executes three commissions (Take this key and put it on that chair. Bring me that book lying on the table and close the door).

Gives value of small coins.

Names 4 colors (yellow, blue, red, green).

8 years:—

Compares two remembered objects (Paper and cardboard, wood and glass, fly and butterfly).

Counts from 20 to 0.

Indicates omissions in pictures (Fig. 7).

Gives day and date.

Repeats five digits (3-8-5-7-1, 9-2-7-3-6, 5-1-8-3-9).

9 years:—

Gives change from 20 cents.

Defines in terms superior to use.

Knows all pieces of our money.

Enumerates the months.

Understands easy questions. (If you broke something belonging to someone else, what would you do about it? If you were going away and missed your train, what would you do? If one of the boys hit you without meaning to, what would you do about it?)

10 years:—

Arranges 5 weights (3-6-9-12-15) grammes.

Copies drawing from memory (10 seconds). Fig. 8.

Criticises absurd statements. (An unlucky bicycle rider fell on his head and was instantly killed; they took him to the hospital and fear that he can not get well.)

Remembered accident—48 persons killed. I have three brothers—Paul and Ernest and myself.)

Uses 3 given words in 2 sentences. (Philadelphia, money, and river.)

12 years:—

Resists suggestions. (Pairs—unequal then—3 pairs equal.)

Makes sentence containing 3 given words. (Philadelphia, money, river.)

Says over 60 words in 3 minutes.

Defines abstract terms. (Charity, justice, kindness.)

Makes out mixed sentence. (For an the at hour early we country starts to asked exercise my I teacher correct my. A defends dog good his master bravely.)

15 years:—

Repeats 7 digits (4-9-2-6-5-3-7, 9-3-5-1-8-2-6

2-7-4-9-3-8-5.)

Gives 3 rhymes.

Repeats sentence of 26 syllables.

Interprets a picture.

Solves problem from several facts. (A woman was walking through a park in C. My neighbor has just received some visits. What is happening at my neighbor's?)

The rules for rating which we apply are two: "The first is as follows: A child has the intelligence of that age all the tests for which he succeeds in passing. Here is a child nine years of age who passes all the tests for the seventh year, he has then at least the intelligence of a child of seven. The second rule is as follows: After determining the age for which a child passes all the tests, a year is added to the intelligence age, if he has succeeded in passing five additional tests belonging to superior age groups, two years are added if he has passed ten such tests, three years if he has passed fifteen, and so on."

"Thus a child passed the five tests for the eighth year; he has the intelligence of eight years; in addition he passed three tests for nine years and two tests for ten years; we add one

year for the five tests, the record stands $8+1=9$, and the child has an intelligence of nine years. Another example: A child passed the 5 tests for 6 years, he has the intelligence of 6 years; he also passed 3 tests for 7 years, 3 for 8 years, 2 for 9 years 2 for 10 years, and 1 for 11 years; this gives him eleven extra tests, and adds two years to his intelligence age, making it 8 years. A last example: A child passed all the tests for 4 years; he passed in addition 1 test for 5 years, 3 for 6 years, 2 for 7 years, 4 for 8 years, 3 for 9 years, and 2 for 10 years; he has passed then 15 additional tests which is equivalent to 3 years and he is accorded the mental age of 7."

CONCLUSION.

It is a curious fact that many students after their first acquaintance with these tests are full of adverse criticism, and suggestions, and yet after they have worked with them the more pure psychology is found to exist and we feel that a great deal of credit must be given to Alfred Binet and Th. Simon for this initial endeavor in attempting to standardize mental tests.

Thus is being worked out a most beneficent activity, not only for the poor unfortunate mental inferior, but also his family, and especially sociologically and financially the State.

CACTUS GRANDIFLORUS.—Experimental research in old school hands has failed to obtain marked pathogenic action of cactus upon dogs. It does not, however, necessarily follow that the human heart is equally refractive to its influence, nor that a remedy of weak pathogenic power is inert as a therapeutic agent. From the provings of Dr. Rubini and four others it is inferred that cactus influences the heart's action mainly through the sympathetic system. The vasomotor ganglia are also involved, especially the first cervical ganglion, giving rise to active congestion of various organs, notably the brain and lungs. *The leading symptom of cactus is a sense of constriction* as though from an iron band, of the heart and lungs. The pulse is usually irregular and rapid. There is pain in the apex region of the heart, shooting down the left arm to ends of fingers. Cactus differs from aconitum napellus in its action by presenting less nervous symptoms. Its clinical uses are to be found principally in palpitation from nervous excitement, from the abuse of coffee or tobacco.

A FEW POINTS ON INFANT FEEDING.

BY

V. A. H. CORNELL, M. D., TRENTON, N. J.

(Read before the New Jersey State Homœopathic Medical Society.)

I HAVE selected infant feeding as the subject for your discussion to-day as I believe that it is the most important part of our pediatric study. A great deal is being done now-a-days in an endeavor to decrease the alarming death-rate which takes place in the early years of life. The elimination of nutritional disorders will do more to lessen infant mortality than any other one factor.

Let us consider then, for a few moments both maternal and artificial feeding. It should be needless for me to even mention the superiority of breast feeding over that with the bottle, and yet how often do we have infants brought to us who have been taken from the breast for no good reason whatsoever, in fact, it is sad to say, whose mothers were advised to do so by the doctor.

The importance of the young mother nursing her off-spring should be brought to the patient's notice long before the child arrives. This should be just as important as an examination of the urine and the measurement of the pelvis, etc., for will it not sometimes be the means of saving a life?

The condition of the breasts and care of the nipples, the general health of the mother during pregnancy, a good nutritious diet, exercise and regular bowel movements will all help toward successful nursing.

There are occasional cases, to be sure, that, even in the face of a good supply of milk, will not thrive on the breast, manipulate it as we will. But presuming we have a normal supply, the management of the breast-feeding is as difficult in some cases as that of artificial feeding.

In the first place we must give our attention to the nursing mother. She should have regular feedings of a good nutritious diet. A great many mothers are told that they must not eat certain vegetables or fruits on account of the acid they contain, or that the baby will have colic if they eat so and so, and as a result, I often find young mothers almost starving for fear they will eat something that will disagree with the baby.

On the other hand we find some mothers nearly killing themselves filling up on cocoa, milk, tea, beer, etc., with the idea that they have not enough milk for their infants and they can make more milk in this way. Disabuse their minds of all such practices and tell them to eat just the same as they did before the baby came, or possibly just a little more if they are hungry and can digest it, as there are two to feed now instead of one.

Exercise in the fresh air is of great importance, freedom from worry, plenty of sleep and a regular bowel movement every day must be insisted upon.

We all of us no doubt find the general tendency to too frequent nursing. The young mother will usually not allow the baby to cry for many minutes especially if her dress buttons down the front. I have met many cases where I believe the child was nursed almost every hour of the day. A number of cases of indigestion and colic in infants from one to three months of age who were fed at two hour intervals have been relieved by no other remedy than extending the interval to three hours. In fact, I instruct the mothers in most of my breast-fed cases (no matter what the age) to nurse their infants every three hours a day and not at all at night if the baby will sleep through until six or seven o'clock in the morning. This, of course, will not suffice in some cases unless supplemented by a feeding or two from the bottle. Very young and puny infants may have to be fed oftener for the first few weeks.

I want to again mention the necessity of the mother nursing her off-spring if there is any possibility of success. The tendency is to wean the baby right away in the early months, even when the child is thriving. This is because the mother interprets all kinds of crying for hunger. No baby should be weaned until after careful weighing and treatment for at least two weeks, no gain is perceived and even the breast feeding should be supplemented by a bottle or two to make up the deficiency, or even three or four feedings from the bottle. In other words conserve every drop of breast milk for the young infant three or four months of age, that is possible.

Then again in the latter months we have trouble in making some mothers wean their infants when it is absolutely indicated and necessary. They will nurse on for months with an infant standing still in weight or actually losing.

I do not much favor weighing the infant immediately before

and after the feeding in order to tell the quantity of breast milk, unless it can be carefully done several times during the day and on different days, as some infants will gain six or eight ounces a week when a single weighing might show that only an ounce or two had been taken from the breast at a certain feeding. The surest way is to observe the weight for one or two weeks. In cases of insufficient milk the infant will usually hang on to the breast for half an hour or longer, will cry a great deal and sleep poorly.

I think a great mistake is made in allowing the baby too much sweetened water because it cries a little for the first two or three days of its life while the milk is coming into the breast. The regular sucking of the infant is certainly a great aid to lactation and if the baby is put to sleep with warm water or what is even worse, catnip tea, he will not do his part of the work.

While everything must be done to encourage breast feeding, it is not right to wait too long and lose too much ground before we make a change. Good breast milk is better than good artificial feeding, but good artificial feeding is better than poor breast milk.

As regards wet nursing, I have had but very little experience. However, we know there is no doubt but what it has saved many lives. The great draw-back to wet nursing is its expense and the inability to get a competent, healthy nurse at the time she is wanted.

As a general thing, I believe it is best to try mixed feeding for a while before allowing the breasts to dry up and resorting to artificial feeding altogether. However, I find that sooner or later we are compelled to feed upon the bottle alone, as the diminishing of the breast milk either in quantity or quality usually means the beginning of the end.

We now come to the artificial feeding. There are several different methods of feeding an infant artificially. Some are scientific and some are not. A great many mothers who are compelled for one reason or another to rear their off-spring on the bottle are given a few meager instructions by a neighbor, a nurse, or possibly sometimes their physician. They are told to buy a package of somebody's food and dilute it with so much milk and feed so often or to follow directions on the can or box. This method, of course, we cannot too severely condemn; it has killed many a fine healthy child. This hap-

hazard way of handling the unfortunate infant who has been deprived of nourishment from its mother supplies us with great majority of different feeding cases, marasmus, wasting and starvation or any other name that you may give to such results.

Human milk being as we all know the ideal food for the infant, the scientific methods to pursue would apparently be to secure a food that most nearly resembles it in its different constituents. But this is where the rub comes. One set of pediatricists tells us that this result can be best obtained by diluting top-milks of different percentages with boiled water and adding enough sugar to make six or seven per cent.

Other enthusiasts will recommend the Caloric method or feeding according to the number of calories required for a certain age and a certain weight.

A number of French writers advocate the feeding of undiluted whole milk, providing it is sterilized, even to the youngest infants.

During the last four or five years a great many writers are advocating the simpler forms of feeding as it has been found that cows' milk cannot be changed to human milk, and this even when it has been made to resemble it very closely by top-milk formulas some infants cannot seem to digest the high percentage of fat.

The chief objection to feeding by simply diluting whole milk with water is that it will necessarily be very low in fat and Rickets is supposed to result from a long continued food low in fat. This could be overcome by diluting seven per cent top-milk for the first three or four months. During the last two years, I have been using three simpler dilutions in a number of cases with more success than was at first looked for, and have watched for later development of Rickets, but so far have not found any evidence of this condition from such feeding, and so we see there is a great variety of methods.

It would seem as though some of the ideas must be way wrong if the other is right and vice versa. The fact of the matter is that no set rule will work for all cases. Everyone will have some success. They will also have some failures, especially if they stick to one set of formulas or one method of feeding for all infants. In other words we cannot always make the infant fit the food—we must make the food fit the infant.

Infant feeding is somewhat like the practice of medicine with drugs. Some patients will get well no matter what drug is prescribed, in fact, they get well when drugs are prescribed that are absolutely contraindicated, not on account of it but in spite of it. It is the same way with some infants—they will apparently thrive on any old food prepared in any old way. But it is the difficult case that is losing ground, the case that will surely die if the right food is not given. This is the case that must be prescribed for intelligently.

The percentage of successful feeding cases that a physician will have will be in proportion to the amount of knowledge that he has of the underlying principles of artificial feeding. If the child vomits he must know why. Is it because he has taken too much food or taken it too fast? Or is it because the percentage of fat is too high? If he has colic, has he been overfed or are the proteids in excess? If there is constipation is it due to too much proteid, too much fat or is it a constipation due to too small an amount of food? If the child does not gain is he underfed or overfed or must we increase the fat, the sugar or the proteid? Is the diarrhoea caused by an excess of fat or sugar or what? If he does not sleep is he hungry or has he indigestion or is it due to causes outside of the feeding altogether? These will be a few of the problems that will confront us and the ability to properly adjust the food to overcome these symptoms will greatly aid us in bringing our feeding cases to a successful issue.

The objects sought for are, a normal development and gain in weight, a quiet comfortable child who sleeps most of the time and is free from digestive disturbances and the absence of symptoms of rickets or other nutritive disorders.

If one obtains these results, I think it matters little whether he has done so by diluting whole milk or top-milk or whether he dilutes the milk at all, but he must know the requirements of the case he has at hand and how to fulfill these requirements. The mother must bring the infant regularly to the office or the clinic as frequent changes will have to be made especially during the first few weeks and months of life.

Clean fresh cows' milk is absolutely necessary for success in infant feeding.

One should see that the infant is getting about the required number of calories for its weight. These may have to be increased or diminished according to the symptoms. If the

infant does not gain, feed him more in calories, providing his digestive organs can stand it. On the other hand, decrease the calories below the average requirement if it is necessary to do so in order to overcome any digestive disturbances. Besides see to it that the caloric needs of the infant are somewhere near the average. The different ingredients of the food such as the fats, the proteids and the carbohydrates should be in such a relative proportion as to satisfy his nutritional and digestive demands.

Regularity of feeding, the proper amount in number of ounces for each feed, as well as plenty of fresh air will all help the infant to digest, assimilate and be properly nourished on the food that he is receiving, be it artificial or natural.

Each case must be studied individually. Probably no two cases will be just alike—use judgment in prescribing—change according to symptoms and indications—follow no set rule, for infants seem to be prone to upset the best of rules.

Just a word in closing in regard to proprietary foods. It is their abuse and not their use that causes the trouble. One must know their exact composition and their caloric value; use them as you would a drug, when indicated. In my hands they have certainly been of benefit in certain cases.

HEADACHE.

BY

OLIVER K. GRIER, M. D.

Surgeon and Anæsthetist to the Wyoming Valley Homœopathic Hospital.

(Read before the Luzerne County Homœopathic Medical Society.)

WHILE headache is not classed as a disease *per se*, yet it is a very common symptom we are all called upon to treat.

In order to cope with the symptom headache successfully, we must as a rule, have some definite knowledge of its cause and if possible, remove it. While we all must admit that many headaches have been permanently cured with the homœopathic remedy without knowing the cause, yet if we can determine it we can more intelligently treat our patient.

In no class of ailments is the question of aetiology of more

importance than in the one now under consideration. In fact given the cause of the headache in a given case, its prompt and permanent cure becomes a comparatively easy matter. In the treatment of headaches there are certain points that must be carefully inquired into, viz.:

Is the pain constant or paroxysmal?

If constant does it vary in its intensity?

If paroxysmal what is its frequency and duration?

Is it a pain or a mere uncomfortable sensation?

Do the paroxysms have a regular definite cycle?

Character of pain whether throbbing, sharp, dull or shooting.

Location of pain.

Its associated symptoms.

How is it affected by certain actions on the part of the patient, as use of eyes, change in posture, sneezing, coughing, or pressure over seat of pain?

Also note effect of weather, light, noise, heat or cold.

Headaches from an aetiological standpoint, include headache from organic disease of the brain as in tumor, which is characterized by the constancy of the pain, nausea and vomiting of the cerebral type (projectile) associated with a clean tongue. The pain is severe and paroxysmal. The intensity depends upon the proximity of the lesion to the meninges. The nearer the surface the greater will be the pain.

Headaches due to alterations in the vascular supply of the brain are congestive or anaemic.

Toxaemic headaches include those due to uraemia, rheumatism, syphilis, malaria, diabetes.

The rheumatic headache is of a dull, boring, aching character and is usually associated with soreness of the scalp.

Malarial headaches are characterized by their periodicity.

Syphilitic headaches are of a boring and splitting type involving a portion of the head and are always worse at night.

Headaches of gastric origin are associated with the well known gastro-intestinal symptoms.

Reflex headaches may arise from the eyes as in eye strain, nasal, post-nasal and throat trouble, also from utero-ovarian trouble.

Vertical headaches in women are nearly all due to utero-ovarian trouble and endo-cervicitis.

The location of the headache frequently suggests the cause.

Frontal headaches are usually due to one of the following: Rhinitis, toxaemia, frontal sinus disease, post-nasal adenoids, refractive errors, iritis and muscular asthenopia.

Occipital headaches suggest toxaemia, rheumatism, syphilis, renal disease, cerebellar disease, and muscular insufficiencies.

Vertical headaches suggest some remote organ as being the cause and usually are due to utero-ovarian disease.

Temporal headaches suggest rheumatism, disease of the teeth, errors in refraction and middle ear disease.

Having determined the cause of the headache this naturally directs our attention to certain classes of remedies which are known to have some curative influence upon the organ or number of organs at fault.

So headaches due to gastric troubles suggest such remedies as *Nux Vomica*, *Bryonia*, *Iris Versicolor*, *Natrum Muriaticum*, *Kali. Bichromicum*, *Pulsatilla*.

Ocular headaches suggest *Arnica*, *Bryonia*, *Rhus*, *Ruta*, *Belladonna*, *Sepia* and *Gelsemium*.

Vertex headaches suggest *Cimicifuga*, *Cannabis Sativa*, *Cannabis Indica*, *Gelsemium*, *Caulophyllum*, *Sepia*, *Sulphur* and *Lachesis*.

Congestive headaches suggest *Belladonna*, *Glonoin*, *Ferrum*, *Mellilotus*.

Periodical headaches suggest *Sanguinaria*, *Stannum*, *Cedron Silica*, *Sulphur* and *Lachesis*.

Inasmuch as the location of the headache suggests the cause, so also does the location and character of the pain suggest to our minds certain remedies.

When the patient complains of a lump or ball in the middle of the forehead, one naturally thinks of *Staphisagria*.

Sensations as if a nail were driven into the head, calls to mind *Coffea* and *Ignatia*.

The headache of *Coffea* is characterized by being one-sided, sensation as if a nail were driven into the head, which is worse in the open air. Hypersensitive and active pain. The pain is not relieved by lying on the affected side.

In *Ignatia* you have the same nail-like pain but it is relieved by lying on the painful side. The *Ignatia* patient is decidedly worse in the presence of tobacco smoke, and vomiting and large quantities of gas, is the rule in the nervous patient. Grief and worry frequently cause the *Ignatia* type of headache, while *Coffea* headaches are due to pleasant surprises.

Sensation as if the eyes were being drawn into the head suggests *Paris Quadrifolia*.

Sensation as if a board or bar were strapped on the head suggests *Rhus* or *Dulcamara*. If due to result of exposure to cold or damp weather, *Dulcamara* is the remedy. Should the scalp be sore to touch and of a rheumatic nature, *Rhus* is the remedy.

Frequently patients complain of a sensation of emptiness in the head and immediately the homoeopathic physician thinks of *Phosphorus* and *Causticum*. To differentiate is an easy matter. The typical *Phosphorus* patient and the sensation of emptiness in *Phosphorus* is felt over the entire head, while with *Causticum* the sensation of emptiness is confined to the forehead. Then too, the *Causticum* patient may be of a rheumatic nature and the symptoms are always worse in fine weather. While *Phosphorus* is worse in stormy weather and especially prior to and during the electrical storm.

Patients who complain of a sensation as though the head were opening and closing, this symptom calls to mind *Cimicifuga* and *Cannabis Indica*. The well known mental symptoms of *Cannabis Indica*, exaggeration of time and space, differentiate these two remedies. The *Cimicifuga* patient has a terrific headache almost driving to madness.

The symptoms of a band-like feeling about the head reminds us of *Carbolic Acid*, *Gelsemium*, *Nitric Acid* and *Sulphur*.

Carbolic Acid and *Gelsemium* both have mental and bodily languor, malaise and disinclination to study, both have a band-like feeling around the head, but *Gelsemium* has more hebetude, drowsiness, dizziness, dullness and burning of the eyes while *Carbolic Acid* has an acuteness of smell.

The sensation of constriction about the head in *Nitric Acid*, is not so much like a band about the head, but a sensation as though the scalp were too tight and is always worse at night and relieved in the open air.

Should the constriction be associated with heat on the top of the head and burning of the soles of the feet, our old friend *Sulphur* will be the remedy.

Not infrequently we are called to see patients suffering from a headache and find them with their head wrapped up. This one objective symptom alone suggests to our minds *Argentum Nitricum*, *Silica* and *Magnesia Phos*.

The *Silica* headache begins in the back of the head and

nape of the neck and travels over to the front of the head. The Silica patient is prone to sweat of the head and feet, very sensitive to cold air; hence the symptom wrapping the head up warm relieves while *Argentum Nitricum* is relieved from pressure and not from warmth.

Then too the *Argentum Nitricum* headache does not begin in the occiput as does that of Silica but in the frontal region. The head feels large and the pains are confined to the frontal region and may extend to the root of the nose.

Frequently headaches begin and are preceded by a blur or dimness of vision and immediately we think of *Gelsemium*, *Iris*, *Natrum Muriaticum*, and *Kali. Bichromicum*.

The *Gelsemium* headache is frequently associated with ocular troubles, hence the dim vision, diplopia, etc. The pain begins in the occiput and travels over the head and settles in one eye similar to *Sanguinaria*. But in *Gelsemium* you have the band-like feeling, dim vision, dizziness, drowsiness, dullness and burning of the eyes.

The headache of *Gelsemium* is frequently relieved by copious urination.

The headache of *Kali. Bichromicum* also begins and is preceded by dim vision or blindness and as the pain increases and finally settles in one small spot, the vision becomes clearer. So the *Kali. Bichromicum* headache is characterized by blindness preceding the pain and relief of the blindness as the pain increases and finally settles in one small spot, which is characteristic of pain in the *Kali.* group of remedies.

The *Iris* headache also begins and is preceded with dim vision, but it is usually due to or accompanied by some derangement of the stomach. There may be vomiting which is very sour, so sour is the vomit that the teeth are set on edge. There may be a burning from the mouth to the stomach.

The *Iris* headache is more of a periodical one and usually occurs on a Sunday and is frequently found in teachers and brain workers, in whom the relief of the strain of the week's work produces the headache. *Natrum Muriaticum* as in *Iris*, *Gelsemium* and *Kali. Bichromicum* may be preceded by blindness or dimness of vision and it is most frequently found in anaemic and chlorotic girls.

The pain in *Natrum Muriaticum* is of a beating, hammering kind as if little hammers were beating against the skull.

Psorinum also has this hammering like pain but the Psorinum headaches are preceded by hunger and not dim vision.

Congestive headaches suggest such remedies as Belladonna, Ferrum, Glonoin and Mellilotus.

Mellilotus is characterized by the congestive form of headache. There is a sensation as if the head would burst. The pains are intense and throbbing, the face and eyes are red and congested. Frequently the headache is relieved by nose bleed or menstruation.

Belladonna, Bryonia, etc., are so well known that I shall not take the time to differentiate.

Bartlett's Diagnosis and Lilienthal's Therapeutics have been consulted in the preparation of this paper.

IN MEMORIAM.*

JAMES HENDERSON McCLELLAND, M. D., D. Sc.

Physician. Statesman. Masterbuilder.

A LEADER OF MEN.

Born, May 20, 1845. Died, November 14, 1913.

Both events occurred in Pittsburgh, the beloved city of his youth, his manhood and his old age. His characteristics were: sincerity of purpose, moral steadfastness and mental acuteness; the three great essentials of a leader.

He had the intellectual sympathy which enabled him to put himself in the place of his fellows, and to understand their motives and actions. This knowledge of men was the source of his wisdom and his power.

Up to the close of a comparatively long life, which covered sixty-eight years, five months and fifteen days, he was intellectually and scientifically alert. Possessing a singularly calm and placid temperament, he was a splendid example of gentleness combined with rare strength of character, purpose and mind.

*A part of the Memorial Address presented to the American Institute of Homoeopathy at Atlantic City, N. J., Sunday evening, June 28, 1914, by Wm. W. Van Baun, M. D., Philadelphia, Pa.

He met the difficulties and perplexities of life with discriminating judgment and maintained a sustained interest in the daily life of the profession. He gave of himself freely and without price. An indefatigable worker, he never let his work dampen his high spirits or affect his genial disposition. He was filled with the spirit of utter devotion, to the exclusion of personal feeling and comfort. He had the habit of thinking accurately, clearly and quickly when occasion demanded. He soon trained himself to large and sound standards. He had imagination and superb faith in himself and his colleagues. His business foresight was remarkable.

As physician, he stood in the front rank, a finished diagnostician and prescriber. As surgeon he was a skilful and tireless operator. As teacher he was accomplished, forceful and enthusiastic. As a man he acquired great learning, a constant student and persistent traveler. His refinement, culture and spirit of willingness to throw himself with devotion of heart and soul, into any just cause for the benefit of the profession brought him the confidence and co-operation of his associates. They trusted him to the limit and their trust was never betrayed.

His good citizenship was recognized, and his city, State and nation called him to positions of responsibility, which he filled creditably to himself and his profession. He was President of the Pennsylvania State Board of Health, and served many years. He was always an active member of the legislative committee of his many societies. In constructive, sanitary and medical legislation he knew that law is powerless, unless supported and enforced by a well sustained public and professional opinion and sentiment. He saw broadly, clearly and in right perspective and due proportion and his advice was eminently wise and reasonable.

ORGANIZER.

His fort was organization. His diverse interests increased so rapidly that those closest to him were unable to keep track of his extraordinary work. He had the ardor of champion-ship, but no spectacular endowments. Regularity, caution, thrift, industry and perseverance governed all he did. His policies were progressive and bold and were carried daringly to success.

Returning to Pittsburgh in 1867, after graduating at Hahnemann Medical College, Philadelphia, young, fresh and adaptable, he found his local profession weak, ineffective and unorganized. Vigorous, hopeful and confident, he had dreams of a powerful organization and visions of hospitals. The splendor of his first ambitious hospital-plan in the early eighties, was looked upon as a nightmare of extravagance. His ability and energy were equal to the responsibility and that hospital with its great modern duplicate on Centre avenue are monuments to his business capacity. In all his professional work he recognized the necessity of organization to perfect efficiency. He was not selfish. He did not build a machine to advance himself by exploiting the profession. He never tried to create a strong institution or association upon privileges. His standard was duty. He knew men grew capable and efficient by what they gave of themselves freely, and not by what they received as a privilege. He gave the worthy and ambitious man his opportunity and merit alone received his support. He never conspired and seized power for himself or others. He asked no man to sell his moral worth and honesty that he might gain and hold position and power by the sacrifice. He had no use for rewards and punishments based on service to himself. He never magnified a man's professional or personal worth to serve his own ends. He never vindictively pursued and destroyed a man because he would not serve him. He villified no one.

He respected others and helped his fellows without demanding a price. He was too wise to be hoodwinked and too just to be bribed.

Men did not fear McClelland, they loved him, they trusted him, they respected him. These are the things in life that are worth while. They knew he was capable and worthy, that he was pure and sincere, that his honesty was sterling, that his purpose was above reproach, that his service was disinterested, that his loyalty rang true. In return they gave him unsought, freely and abundantly every honor, power and trust they could pour upon him.—(See note 1.)

He was a tower of strength to his colleagues at home and abroad, and the world was his domain. His work founded upon justice and righteousness will endure.

In contrast the strong, dominant resourceful leader of imperial tendencies with arrogance, hate and selfishness usually

finds his results pitiably small and unsatisfactory. No matter how magnificent his capacity, even his apparent victories are short-lived and his seemingly brilliant efforts leave a strain of general weakness, uncertainty and instability.

The tyranny of a medical despot with dictatorial power, breeds revolt. Revolt, unless held strongly in leash by brave, unselfish men of moderate views, runs wild. It destroys both innocent and guilty. The passion of a day will wreck an institution that has taken a century of patient toil and struggle to build. In times of stress it is easy to criticise, to pull down and to destroy. The need is tolerance, the test of fitness will be whether we control circumstances or let circumstances control us. Constructive statesmanship demands honesty and talents of high order; these McClelland had.

THE HAHNEMANN MONUMENT.

This undertaking would have appalled anyone else. The experience of former trials to raise a monument even to an American medical man had all resulted in failure. Nothing ever seems to have been impossible to McClelland. His imagination saw the monument, first dimly and far off, of a magnificence and value never before attempted in honor of a man of medicine. He weighed it well in the balance of true values. Convinced by careful attention he became persuaded he was right. The idea was clear and compelling. He may have felt he was not equal to arriving at his goal. The decision made, he reached and strove for it, giving up all for its attainment. His endurance was inexhaustible. Others grew tired, spent and faint-hearted. He gained strength, his faith exercised all his latent power, he dominated, inspired and guided us to complete success, realizing his hopes to a degree seldom experienced by man.

The monument was unveiled in Washington City, Thursday afternoon, June 21, 1890, in the presence of President McKinley, his Cabinet and other officials, and the members of this Institute and its friends. It stands to-day a triumph of his enterprise.

McClelland was always advanced, progressive, imbued with altruism and desire for public service. Broad minded and sympathetic, his rare courage, his sublime confidence, his invincible optimism rang true and told his moral and spiritual worth.

He had iron in his blood and cheer in his heart. Willing and unafraid, he gave the "last full measure of devotion." His death removes an attractive and striking personality. His loss reaches far beyond his family (See note 2) and his national associates.

No one can accurately total his life of industry well spent for himself and others. A strong and masterful leader. He was a man.

NOTE I.—CHRONOLOGY.

1845-1913.—Born, 20 May, 1845. Died, 14 November, 1913, at Pittsburgh, Pa.

1862-1864.—Western University of Pennsylvania. Now the University of Pittsburgh.

1867.—Graduated from Hahnemann Medical College and Hospital, Philadelphia, March 2, 1867.

1867.—Located in Pittsburgh.

1867.—Appointed on Surgical Staff of Pittsburgh Homœopathic Medical and Surgical Hospital.

1869-1882.—Secretary of the Board of Trustees of the Pittsburgh Homœopathic Hospital.

1882-1913.—Chairman of Executive Committee Homœopathic Hospital.

1884.—Instrumental in building the Homœopathic Hospital on 2nd avenue.

1869-1913.—Trustee of the Homœopathic Hospital.

1876-1879.—Professor of Surgery in Hahnemann Medical College and Hospital in Philadelphia, Pa.

1876.—Started the "Training School for Nurses" in Pittsburgh Hospital. The first school established west of the Alleghenies.

1878.—Delivered course of lectures on Operative Surgery in the Boston University School of Medicine.

1881.—President of the Homœopathic Medical Society of the State of Pennsylvania.

1885.—Member of the Pennsylvania State Board of Health.

1895.—President of the Pennsylvania State Board of Health.

1867-1913.—Member of the American Institute of Homœopathy.

1893.—President of the American Institute of Homœopathy, Chicago, Ill.

1894.—President of the American Institute of Homœopathy, Denver, Col.

1894.—Degree of D. Sc. conferred on him by the Western University of Pennsylvania, now the University of Pittsburgh.

1896.—Vice-President of the International Homœopathic Congress, London, England.

1892-1913.—Chairman of Hahnemann Monument Committee.

1900.—Hahnemann Monument erected and unveiled in Washington City, D. C., June 21, 1900.

1901.—Honorary Vice-President International Homœopathic Congress, Paris, France.

1906.—President Homœopathic International Congress, Atlantic City, N. J.

1907.—Largely instrumental in building the new Homœopathic Hospital on Centre avenue, Pittsburgh.

1907.—Honorary Vice-President of the British Homœopathic Association; honorary member of the Homœopathic Medical Society of Massachusetts; organizer and president of the East End Doctors' Club, Pittsburgh, Pa.

1912.—First President of the International Homœopathic Council, Zurich.

1913.—President of the International Council, Ghent.

1913.—Member of the American College of Surgeons.

NOTE 2.—FAMILY.

Dr. McClelland was the sixth of eleven children. His parentage and ancestry was Scotch-Irish. His mother, Elizabeth Black McClelland, 1810-1870, Pittsburgh, was the daughter of the Rev. John Black, D. D., who was born in County Antrim, North of Ireland. The Rev. Dr. Black graduated at the University of Glasgow, in 1797, and settled in Pittsburgh soon afterwards. He preached in the First Reformed Church of Pittsburgh for nearly fifty years. He was Professor of Ancient Languages in the Northwestern University of Pennsylvania for many years.

Dr. McClelland's father, James Henderson McClelland, 1800-1871, was a man of vigorous mind and strong in body.

He was also of Scotch-Irish stock. Born in Newry, County Down, Ireland. He came to America in 1816, settled in Pittsburgh. He was an architect and builder. At one time he was postmaster of Pittsburgh. He wrote many articles on subjects of public interest and was active in the anti-slavery movement.

Dr. McClelland married Rachel May Pears, daughter of the late John P. Pears, of Pittsburgh, by whom he had three daughters, the youngest having died in infancy. His widow, two daughters, and a brother, Dr. Robert W. McClelland, survive him.

OCCUPATION.

It was first intended that Dr. McClelland should go to the U. S. Military Academy at West Point. He did receive an appointment for the U. S. Naval Academy at Annapolis.

Dr. J. P. Dake, the family physician, persuaded him to study medicine.

TRIBUTE.

The following was written by one who knew and loved him well:

"Dr. McClelland had an unusual personality. He was gifted with great insight and intuition, which strengthened his natural ability and genius as a physician and surgeon. He was endowed with rare judgment, which was exercised with fairness to all.

"As an organizer, he had great ability and power which was recognized at home and abroad. His gentleness and strength, his real goodness and unassuming modesty, make him stand out as a great man.

"He gave himself unselfishly to the cause which he knew would bring much good to the whole world. It will be for what he himself was and stood for that will be always remembered by those who knew him."

EDITORIAL

SOME DANGEROUS THERAPEUTIC PROCEDURES.

PROBABLY every conscientious physician realizes the importance of the injunction to avoid doing harm in instituting therapeutic measures in the treatment of any given case.

Hahnemann, and the early founders of the homœopathic school laid great stress upon this point and one of the highest compliments that has been paid to the homœopathic system of treatment is the remark often sarcastically made that, at least it can do no harm. Unfortunately the same statement cannot always be made regarding the therapeutic measures advocated by the members of the traditional school of medicine, and both the laity and far-sighted physicians of all schools are beginning to view with appreciation, many of the therapeutic methods that have lately come in vogue.

One of the methods now very popular that is fraught with considerable possibilities of danger, is the haphazard administration by the hypodermic method, of various serums, vaccines, and other toxic substances of bacterial origin. It seems that the loss of faith in the therapeutic value of drugs had brought about a favorable psychological condition for the introduction of bacteriologic methods of treatment, until we find among the members of the dominant school a zeal for advising and injecting new serums and vaccines, that is out of all proportion to the actual beneficial results that are obtained from such procedures.

Numerous samples of the bad results of such therapeutic methods have, no doubt come before the attention of all our readers. Friedmann's vaccine for tuberculosis which was exploited as harmless and effective, has been shown after careful investigation, to be both useless and harmful. The venom of the rattlesnake has been widely exploited as a remedy for almost every human ill, from epilepsy to pleurisy. A mere perusal of the list of diseases that this venom is supposed to cure, is sufficient to convince one that it can bear no essential rela-

tion to the majority or perhaps all of them. On the other hand, it has been clearly shown that an injection of this substance may produce definite metabolic disturbances and marked psychic changes; while bacteriologic examinations of the medicinal preparations of this poison found on the market, have shown that almost half of them are contaminated with anaerobic gas-forming bacteria.

Homœopathic practitioners who contemplate the use of poison of the rattlesnake would do vastly better by adhering to the indications and methods of administration advised by Hering and his homœopathic co-workers, rather than to adopt the questionable and dangerous method of hypodermic administration. It is probable that the popularity of the hypodermic needle as a routine method of administering serums, vaccines, toxins and similar products will soon be on the wane; but, in the meantime, the conscientious physician will do well to recognize the dangers of such methods and to appreciate the very scant amount of actual knowledge that we have of the manner of action and of the efficacy of such agents.

We do not wish to be understood as stating that several therapeutic measures have no value whatever; but we are forced to the conclusion that the study of the indications for and the administration of those agents along strictly homœopathic principles, would tend both to lessen the danger and to increase the therapeutic efficacy of these agents from the standpoint of the patients.

G. H. W.

NEW MEMBERS FOR THE STATE SOCIETY.

THE attention of the members of the homœopathic profession of Pennsylvania is called to the list of names published in this issue of the *HAHNEMANNIAN* of homœopathic practitioners of this State who are not affiliated with the State Medical Society. This list was prepared by the membership committee, and while it undoubtedly contains a few errors, it is in the main correct.

It is astonishing to note the number of practitioners in this State, many of them men of ability and importance who, because of lack of interest or because they have not been sufficiently urged, have failed to affiliate themselves with their

state organization. It is the hope of the membership committee that every physician will go carefully over this list and note the men in his community who are non-members of the State Society and make a personal canvass to get them in.

Any extended statement to show the importance of membership in the State Society, both to the individual physician and to the homœopathic profession, is not needed at this time. We take it for granted that every physician whose interests extend beyond his own immediate vicinity recognizes the fact that both his duty and self-interest require that he affiliate himself with his fellow practitioners.

Many of us have had the impression that the members of the homœopathic school in Pennsylvania have been very thoroughly canvassed in regard to membership in the State Society; but it is evident from the large list of non-members that the work has scarcely begun.

Let every man get busy in his own neighborhood among the physicians with whom he is personally acquainted and we will have a record-breaking list of new applicants at the next meeting of the Society.

G. H. W.

RECENT RESEARCH IN PSORIASIS.—Under this heading there appeared in the February number of this journal a resume of observations made by Schamberg and others. Tidy (*Brit. Journ. Dermat.*) while acknowledging the care and labor expended on their valuable and interesting analyses, criticises their conclusions. He divides his remarks into three heads: (1) Are the results obtained peculiar to psoriasis? In reply he is of the opinion that the retention of nitrogen found by the authors referred to is not peculiar to that disease. On the contrary, the "retention" occurs in all conditions in which the skin is widely affected by inflammatory or proliferative processes. Of such, one may take as an example pemphigus foliaceus. (2) What is the explanation of the apparent retention of nitrogen? If stored up in the substance of the skin, great increase in its thickness must have been noticeable, yet this did not happen. It is most improbable that there could be some abnormal form of excretion apart from the skin. Tidy believes that the observed retention of nitrogen is apparent and not real, and is accounted for by loss from the affected skin. (3) Does the retention of nitrogen continue in cases of psoriasis after scaling has ceased? Since it is extremely difficult to establish nitrogenous equilibrium in man, it is impossible to draw conclusions from small retentions of nitrogen, and the inference is legitimate that there is no evidence of retention of nitrogen in psoriasis after the disappearance of the eruption. On the very low protein diet which the authors employed in some instances, often combined with low caloric value, the metabolism must be influenced by two factors, namely, the presence of psoriasis, and the conditions of partial starvation.—*Edinburgh Medical Journal.*

LIST OF HOMOEOPATHIC PHYSICIANS IN PENNSYLVANIA WHO ARE NOT MEMBERS OF THE STATE SOCIETY.

Below you will find a list of physicians throughout the State who are at present not members of the Pennsylvania Homœopathic Medical Society.

Can we as homœopaths afford to have so large a number outside of the ranks of the State Society? They need us and we need them; it is only by building up a strong State organization that we can expect to accomplish a great deal, either for ourselves or our clientele.

Go over this list which is printed alphabetically, according to counties, find your friends or nearest neighbors and get after them in such a manner as they cannot refuse to join the State Society.

You will find a membership blank in this issue and if you require more, kindly communicate with Dr. Chas. A. Ley, 1209 First National Bank Building, Pittsburgh, Pa., Chairman of the Membership Committee.

Allegheny—

Ben Avon. H. O. Mateer. Braddock, Edward W. Dean, Sheldon Hicks, George H. McGeary, Anna B. Watts. Duquesne, Blanch Jackson, George B. Martin. Etna, I. R. Baumgartner. Homestead, Charles C. Huff. McKeesport, George W. Kerns, 616 Market street. Pittsburgh, Walter Bingaman, 7040 Hamilton avenue; Wm. B. Boggess, 4919 Centre avenue; John C. Cooper, 1004 Cedar avenue; Wm. Cowley, 219 Wallace Bldg.; Henry H. Doyle, 521 Negley avenue; Wm. E. Franklin, 1505 Wylie avenue; Wm. C. Har-mount, 175 S. Lang avenue; Carl Hornecker, 204 Forbes Bldg.; D. D. Lerch, 3611 California avenue; Chas. E. Peach, 522 Tarleton avenue; James K. Perrine, 5225 Centre avenue; Rose V. Pitcairn, 716 Arch street; Wm. C. Ranson, 2308 Centre avenue; Walter Rohrkaste, W. Liberty and Albama; Bailey Sullivan, 1513 Lincoln avenue; Robert Wallace, 8071 Jenkins Arcade; Thomas Wallace, 1413 Penn avenue; George B. Wix, 202 Werner Bldg.; Harry Zimmerly, 5204 Second avenue; Mark Zopfle, 1713 Fifth avenue, R. K. Fleming. Sewickley, Thomas Grimes. Tarentum, George W. Getz, Jas. M. Knowlton. Wall, Albert Robinson. Wilksburg, A. B. Smith.

Adams—

Arendtsville, C. Merriman, George P. Weaver. Ida Ville, S. B. Meyers. Gettysburg, Luther H. Diehl, Rice H. Linda-man. Littleton, Chas. P. Gettier. York Springs, H. A. Underwood.

Armstrong—

Ford City, Jesse E. Ambler.

Beaver—

Ambridge, E. W. Shields. Beaver Falls, Homer Bryan. Monaca, Melvern N. Mackal. New Brighton, Walter L. Cross, Thomas McNish, Sam. H. Pettler.

Berks—

Hamburg, P. O. Bernharts, Fred J. Isett. Birdsboro, Ed. M. Deacon. Kutztown, Isadore L. Peters. Reading, Francis H. Brobst, 139 North 6th street; Albert N. Seidel, 824 North 10th street; Leon Driebellis. Shillington, Leonard Hain. Vinemont, Chas. T. Haines. Walter Park, Robert L. Walter.

Blair—

Altoona, Olin K. McGarrah, 825 8th street. Bellwood, Forrest B. Fletcher. Frankstown, Webster Calvin, J. A. Gold.

Bradford—

Athens, Ed. M. Cowell, Julis Dood. Milan, Polly S. Tracy. Sayre, Homer Tuttle. Towanda, Henry Champlin. Troy, Mahlon Ballard.

Bucks—

Bristol, Jos. B. Abbott. Morrisville, Stephen Wetmore.

Butler—

Evans City, J. M. List. Porterville, J. A. Shafer.

Cambria—

Johnstown, Frank Nichols, 544 Main street; Wm. H. Wallace, 448 Lincoln avenue.

Carbon—

Lehighton, Frank Dreibellis. Mauch Chunk, Stewart Kirby.

Centre—

Snowshoe, Ed. H. Harris. State College, Wilmer Kipe.

Chester—

Berwyn, George W. Mitchell. Coatesville. Henry E. Porter. Downingtown, M. Mercer, E. C. Winsmore. Kennett Square, Alpheus Gregg. Oxford, John F. Rose. Phoenixville, Chas. M. Benham, West Chester, Clyde E. Ehinger. Levi Hoopes, Chas. R. Palmer.

Clearfield—

Dubois, Wm. W. Seabury.

Clinton—

Lock Haven, Geo. C. Barnley. Loganton, F. S. Smith.

Columbia—

Bloomsburg, John Rutter, C. B. Yost. Orangeville, Alfred P. Stoddard.

Crawford—

Centreville, Girard A. Cranch. Linesville, Allen B. Collins, Ella J. Collins. Meadville, Ralph E. Pond. Springboro, Wilbur Sheldon. Titusville, Neuton Burchfield. Townville, Wm. W. Quay.

Cumberland—

Boiling Springs, Milton Peters. Carlisle, Ed. S. Conlyn, Jas. C. Fickel, Wm. E. Peters.

Dauphin—

Harrisburg, Albert Brandt, 1446 Market street; Alvin I. Miller, 151 S. 3rd street; Martha Pollack, 232 N. 2nd street. Millersburg, Harry Wlamer.

Delaware—

Chester, Norman Bassett, Charles H. Hubbard, Francis Pounds. Lansdowne, Wm. T. McGuire, Howard S. Busler. Manoa, Wm. F. Lee. Media, Sam A. Beal.

Erie—

Albion, Garner Spaulding. Corry, P. L. Hatch, John O. Jackson, J. C. Jackson, Charles S. Waggoner. Erie, Lucy H. Black, 129 W. 8th street; A. G. Cranch; Herman C. Galster, 129 W. 25th street; E. E. Griswold; Henry Harlwick; Louis J. Ireland, 217 E. 12th street; Tullius P. Johnson, 139 E. 6th street; Jos. H. King, 142 E. 2nd street; Frank B. Krimmel, 433 E. 6th street; J. F. Land; Leininger Carl; Katherine Law, 306 Marine Bank Bldg.; C. A. McNeil; Andrew McPherson, 1707 Peach street; Mrs. U. A. B. Woods. Fairview, Helen M. Weeks. Girard, Earl W. Dewey. North East, Melvin L. Adams.

Fayette—

Connellsville, Francis Whiteman. Dunbar, E. M. Ginis, W. J. Hamilton.

Forest—

Tionesta, A. W. Douth.

Franklin—

Chambersburg, Anna Burkard, F. N. Hamblin, Anna Ryder. Greencastle, Fletcher J. Nowell, Montalto, Chester G. Crist. Waynesboro, N. C. Detrich, Walter Peane.

Indiana—

Blairsville, George Hunter, John M. Leonard. Indiana, W. C. Kipe.

Juniata—

Thompstontown, G. E. Hanzig.

Lackawanna—

Carbondale, John D. Day. Clark Summit, Clarence Merrill. Scranton, Nelson Douglas, 1230 Providence street; Bruce Hamlin, 730 Cedar street; Wm. A. McDowell, 127 Adams street; Ernest L. Peet, 102 W. Market street. Taylor, John L. Griffith.

Lancaster—

Columbia, Smith Armor. Lancaster, Don M. Myers, 305 Lemon street. New Holland, John E. Harner, John A. Hoffman.

Lawrence—

New Castle, Sam Warner, 118 S. Jefferson street. Pulaski, Jas. A. Shaffer.

Lebanon—

Lebanon, Wm. T. Bruce, Adam J. Riegel.

Lehigh—

Allentown, E. C. Statler. Catasauqua, Alfred J. Becker. Fogelsville, Calvin E. Helfrich.

Luzerne—

Ashley, W. Harry Hoffman. Freeland, Everett W. Rutter. Hazleton, John W. Leckie. Kingston, John G. Sperling, Chas. C. Thompson. Wilkes-Barre, F. A. Whiterman.

Lycoming—

Milton, Wm. H. Folmer. Williamsport, J. B. Haag, Wm. E. Kunkle.

Mercer—

Freedonia, Thomas F. Hogue. Greenville, Fred O. Batteiger, Rob. W. Brown. John H. Martin, Preston Steel. Grove City, Mary J. Allen, Homer Wilson, Wm. L. Wilson. Mercer, F. W. Knippell. Sharon, Chas. W. Hoyt, Frank H. Hoyt, Frank H. Hoyt, Allen Hyde. Sharpville, Addison Catron.

Mifflin—

Lewistown, Crawford D. Smith. Paintersville, J. H. Meyers.

Monroe—

Effort, Wm. F. Satchell.

Montgomery—

Ardmore, Horace L. Kulp. Bethayres, David G. Harvey. Collegeville, Wm. H. Corson, Jr. Cynwyd, Jos. M. Gerhart. Fort Washington, Theo. F. Conover. Glenside, Jos. A. Brooke. Jenkintown, Herbert J. Irvin. Norristown, Chas.

Horning, Chas. T. Shinn, Dan Wilson. Pottstown, Wallace W. Dill. Telford, John K. Hedrick.

Montour—

Danville, Harry Hinshillwood, John H. Sandell.

McKean—

Bradford, C. F. Alling, James Dunn, Russell R. Kephart. E. A. VanScoy, Ben White. Port Allegheny, Wm. F. Cook.

Northampton—

Bangor, Merritt Heckenberry. Bethlehem, Andrew G. Lieb. Easton, Wm. K. Detweiler, Egbert D. Doolittle, 250 Bushkill; Edwin J. West, 26 S. 5th street. Northampton, Albert H. Laros. Walnutport, Jas. J. Reitz.

Northumberland—

Milton, Chas. Tomlinson. Mt. Carmel, Wm. A. Lornison. Shamokin, Geo. W. Dreher. Sunbury, Howard Evans. Watsontown, Richard H. Humell.

Perry—

Duncannon, H. W. McKenzie, D. S. Smith.

Potter—

Coudersport, Philip L. Hatch. Shinglehouse, C. A. Crosby.

Philadelphia—

Philadelphia, Francis L. Abbott, 3116 North Broad street. Robert J. Abele, 718 South 21st street. Wm. S. Ackley, 2812 W. Lehigh street. George Alexander, 1831 Chestnut street. Francis C. Allen, 1522 Girard street. Joshua Allen, 2136 E. Cumberland street. Richard Allen, 1405 Oxford street. Sara F. Allen, 1300 Pine street. Wm. S. Ambler, 4908 Germantown avenue. Ed. P. Anshutz, 1011 Arch street. Francis Archibald, 2211 N. 16th street. Chas. A. Ayers, 1505 Morris street. Elizabeth M. Baer, 1334 Spruce street. George F. Baer, 161 N. 60th street. Ben Bainbridge, 2128 E. Cumberland street. Willis L. Barris, 3020 Diamond street. Frank D. Bauman, 640 E. Indiana street. Wm. H. Beatty, 5317 Girard avenue. C. H. Beebe, 2117 E. Cumberland street. Marion Benjamin, 3602 Old York Road. Jas. B. Berke, St. Luke's Hospital. Wm. Berkenstock, 1639 Girard street. Theo. G. Bieling, 1220 N. 13th street. John P. Birch, 5226 Chester avenue. Gustave E. Bonnett, 13th and Lindley streets. Bartholomew Brooks, 1719 N. 25th street. S. Hastings Brown, 1409 N. 12th street. Margaret Burgess, 1703 Chestnut street. Walton S. Burriss, 6643 Torresdale Tac. Jos. M. Caley, 1513 Green street. David M. Castle, 2007 Arch street. Thomas W. Clark, 6801 Woodland avenue. Sam W. Clover, 1605 N. 13th street. Newton Conant, 3800 N. Broad street.

Chas. H. Conover, 1904 Green street. H. Cowgill, 1707 Montgomery avenue. Edwin Couperthwaite, 1821 Venango street. Leon Dalsimer, Empire Bldg. Louis M. Diemer, 1851 E. Allegheny avenue. Jos. C. Ellis, 1610 N. 62nd street. H. Esposito, West Phila. Hom. Hospital. Matthew Faunce, 1217 E. Susquehanna avenue. W. L. Fellow, 2048 N. 63 rd street. Lemuel E. Finch, 1329 Arch street. Horace J. Furman, 1707 W. Tioga street. Chris. A. Frame, 5932 Ridge avenue. Wm. L. Franck, 219 Tabor, Olney. Chas. V. Fries, 1933 Bainbridge street. C. V. B. Fries, 5501 Chester avenue. Arch. T. Gardner, 1700 N. 16th street. George W. Gardner, 1700 N. 16th street. Asa S. Gaskill, 12 W. Sharpnack, Germantown. John R. Gillette, 1801 N. 15th street. Biddle Gillman, 1316 N. 56th street. Wm. T. Graham, 5027 Woodland avenue. Harry H. Gregory, 5520 N. 5th street. Wm. O. Griggs, 509 N. Franklin. Francis Gross, 1816 Erie street. Wm. J. Guernsey, 4340 Frankford. Evan J. Hackney, 400 N. 52nd street. F. J. Haerer, 719 Drexel Bldg. Sharpless P. Hall, 4613 Chester avenue. Edwin A. Hambright, 2025 W. Norris street. Raymond Harris, 1843 S. Broad street. Allen Harrison, 512 W. Erie avenue. Harriet Hartley, 1302 Spruce street. Harry Hathaway, 3218 N. 15th street. Howard Heinke, 107 E. Lehigh avenue. John Hanshall, 3039 York street. Amelia Hess, 1911 Mt. Vernon street. Ray Higgins, 6009 Sansom. John B. Hill, 3105 Frankford avenue. Chas. D. Holden, 1650 Eyre street. Wm. H. Hopkins, 5800 Springfield avenue. Ray E. Hunter, 644 N. 12th street. Arthur Huselton, 129 N. 16th street. Harry Hyzer, 2103 Chestnut street. Earle B. Ingram, 1503 N. 22nd street. Walter James, 1231 Locust street. Chaplin G. Jenkins, 6406 Germantown avenue. Theo. German, 2911 Decatur Hbg. Halton Jessup, 422 Weightman Bldg. H. D. Johnston, 4502 Chester avenue. E. W. Jones, 2731 Columbia avenue. Edwin Jones, 1306 S. Broad street. John Jones, 1802 Mt. Vernon street. Wm. P. Kaercher, 1452 N. 11th street. Wm. H. Kerr, 1716 N. 18th street. J. M. Kenworthy, 1825 Chestnut street. G. W. Kirk, 1427 Girard ave. A. Korndorfer, Jr., 1904 Spruce street. Amos Krewson, 4613 Paul street, Frankford. Frank Livezey, 2807 N. Broad street. Wm. Howard Lyle, 1505 Girard street. R. H. McCarty, 421 N. 63rd street. Wm. McDonnell, 1220 Stiles street. Ed. K. McGill, 202 S. 11th street. Wm. McGeever, 1801 Porter street. Douglas MacFarland, 1805 Chestnut street. Howard S. Mace, 916 N. 41st street. Chas. F. Manson, 3853 N. Broad street. George W. Mays, 1333 Somerset street. Jennie Medley, 1820 Diamond street. Franklin E. Merriam, 149 Lehigh avenue. Fred W. Messerve, 322 Perry

Bldg. Niles M. Miller, 4100 Walnut street. Nicholas Mitchell, 1505 Spruce street. Wm. S. Moat, 212 Flanders Bldg. John F. Monell, 6429 Vine street. Wm. B. Marford, 1444 Tasker street. Fred Mount, 1216 Locust street. Martin Nevinger, 2131 W. Dauphin street. George W. Newman, 7959 Rising Sun avenue. H. C. Nicholson, 2000 Wallace street. Albert Norris, 4814 Chester street. John J. Oechsle, 541 E. Thompson street. Rob. A. Patterson, 510 Perry Bldg. Wm. Peacock, 2217 N. 6th street. Wm. A. Ploucher, 3332 Howell, Wissng. Jos. W. Post, 809 W. Erie street. Wm. R. Powell, 1701 Chestnut street. Howard E. Randall, 34 S. 16th street. Rufus Reed, 720 Witherspoon Bldg. Herbert Reynolds, 4629 Richmond. Charles Robelen, 1200 S. 52nd street. Ed. A. Robinson, 6505 Germantown avenue. Maximilian Roedmann, 1631 N. 15th street. Philip C. Sanderson, 542 N. 10th street. Norman Saylor, 84th and Bartram. Clayton Schwenk, 2040 N. Broad street. Jas. P. Scott, 1419 Girard avenue. Oscar Seely, 318 Perry Bldg. Lemuel T. Sewell, 1114 Fitzwater street. Charles H. Seyfert, 5624 Girard avenue. Ed. E. Sharpless, 1624 N. 18th street. John R. Shetter, 1513 Shunk street. Jas. S. Shoemaker, 3112 Frankford avenue. Wm. L. Shoemaker, 2248 Howard street. George E. Simmer, 2512 N. 6th street. Thomas Skirving, 219 E. Wistar street, Gtn. Frank Slaughter, 1429 Girard street. Louis F. Smiley, 117 N. 11th street. Nathan Smilie, 624 Weightman Bldg. Alfred Smith, 1110 E. Montgomery avenue. Benner Smith, 2842 N. 24th street. Chas. H. Smith, 3025 Frankford avenue. George L. Smith, 5538 Wayne avenue, Gtn. Ernest Smith, 1425 N. Broad street. George L. Sobers, 670 N. 13th street. Wm. Sonneborn, 2311 E. York street. Fletcher Souder, 1803 N. 15th street. Ralph L. Souder, 2314 Reed street. Jos. A. Stegnem, St. Luke's Hospital. A. G. Stetson, 5903 Walnut street. Knox Stewart, 37 N. 38th street. Wm. Stiles, 1939 Fairmount avenue. Wm. Suplee, 2318 S. Broad street. Willard B. Terry, 727 S. 60th street. Ed. H. Thompson, 2118 Orthodox street, Fkd. Fred Traganza, 2009 N. 22nd street. Wilmer Trinkle, 1438 N. 13th street. Robert Tudor, 29 N. 13th street. Jas. M. Tyson, 709 E. Chelton, Gtn. Fred Van Gunten, 1333 N. 12th srteet. C. V. B. Vedder, 5731 Baltimore avenue. LeRoy Walker, 2218 N. 13th street. John Ward, 126 S. 39th street. Rufus Weaver, Hahnemann Med. College. Lamphear Webb, 1426 Diamond street. Chas. Wells, 773 N. Preston street. Lewis C. Wessels, 1918 N. 22nd street. John J. Whelin, 4353 Paul street, Fkd. Frank Widman, 1637 Girard street. Wm. G. Widmayer, 805 W. Lehigh avenue. Herbert Williams, 2 N. 50th street. Rutledge Wilbank, 505

Tasker street. Jos. R. Witzel, 2615 Bridge street. Albert F. Wolf, 1800 Cayuga street. Wm. Yeareley, 2027 N. 15th street.

Schuylkill—

Ashland, Lyon A. Snyder. Mahanoy City, Abraham Seligman. Minersville, Francis Quinum. Pine Grove, or Phoenixville, Howard Terry. Jr.

Somerset—

Somerset, S. Mcl. Wilson.

Susquehanna—

New Milford, Clarence A. Hull.

Tioga—

Mainsburg, Harry C. Harkness. Mansfield, Clarence Klaer. Nelson, G. C. Burnley.

Union—

Mazeppa, S. A. Diffender.

Venango—

Franklin, John M. Wallace, Edwin J. Curran. Oil City, J. W. Dorworth, Andrew W. Goodwin, John J. Hadley, C. W. Jacobs, Sylvester W. Sellow, Philip Sheriden. Plum, W. J. Ritchey. Rouseville, H. H. Lamb.

Warren—

Warren, G. S. Davies, J. N. Davies, L. B. Sayles. Youngville, W. M. Hays.

York—

Hanover, Chas. Wagner. Red Lion, Harry Howden. York, Julia Crawford, 139 E. Market street; John E. Dehoff, 485 W. Market street; John MacDonald, 335 E. Philadelphia street.

Washington—

Donora, Sam Edmunds.. Monongahela, John C. Brisbane. MacDonald, J. A. Douglass. Prosperity, J. Cary. Washington, H. P. Cristman, J. M. Maurer.

Westmoreland—

Greensburg, R. G. Finley. Irwin, J. R. Bartlett. Mt. Pleasant, J. DeWitt Dickey. New Kensington, R. M. Powers.

York—

Hanover, Clayton E. Bortner, Oliver T. Everhart.

**COMMUNICATION FROM LEON T. ASHCRAFT, M. D., PRESIDENT OF THE
STATE SOCIETY.**

The fifty-first session of the Homœopathic Medical Society of the State of Pennsylvania will be held at Galen Hall, Wernersville, Pa., September 24th, 25th and 26th, 1914. The place selected for our meeting is ideal. It may be quickly reached from nearly all points in the State and is within two hours ride of the majority of the Society. The hotel is new, its appointments quite up-to-date, its cuisine excellent. As is doubtless known, it is situated at the topmost point of the mountain, about seventeen hundred feet above sea level. The committee have been able to secure accommodations for the members at a reduced rate. Altogether we feel like congratulating ourself upon the place of the meeting. Undoubtedly there will be a large attendance. Such has been assured your president from the many local societies visited during the past year.

Pennsylvania has ever shown a lively interest in State Society meetings. Only those who are regular in their attendance can appreciate the mental stimulus accruing from interchanges of ripe experiences. It is incumbent that we have an enthusiastic meeting. The interest of our school in every sense demands it.

OLIVE OIL.—In the treatment of inveterate constipation injections of olive oil are of the greatest value. The patient is directed to obtain a quart of the oil and sterilize it by immersion for half an hour in boiling water. At night, after the patient has gone to bed, he is directed to inject from 2 to 3 ounces of the oil into the rectum by means of an ear syringe and not arise, if possible, until morning. The oil, in the course of the night, travels up the large intestine and lubricates the bowel and the hard fecal lumps. The first thing in the morning the patient is directed to go to stool and if the bowels do not move, to start them by an injection of warm water. Patients who are willing to follow out this treatment for, at least, a month, and to follow suitable directions as regards diet, are greatly benefitted and eventually cured. In connection with this treatment the indicated remedy is given internally, which, in view of a previous history of being addicted to cathartics, is usually *nux vomica*.—Dr. A. E. Hinsdale, in *Medical Century*.

GLEANINGS

THE CARDIAC SIGN IN CARCINOMA.—The cardiac sign in carcinoma is a remarkable diminution of the area of cardiac dullness in the recumbent posture as determined by digital percussion. The dullness begins above the fourth or fifth costal cartilage, has its right edge about one-half or one inch to the left of the midsternal line, and measures across less than two inches at the level of the fifth costal cartilage. Often it measures less than one inch across, and sometimes there is no cardiac dullness at all. Often the dullness, though narrow in the recumbent posture, is normally or even abnormally broad in the erect.

Certain limitations exist to the significance of the sign. Thus when any cause is present tending, like ordinary emphysema, to reduce the area of cardiac dullness, then a very small dullness naturally conveys no special meaning. On the other hand, when there is a well-known cause of enlargement of heart dullness, such as albuminuria, valvular heart disease, pericarditis, or retraction of lung from phthisis or past pleurisy, then the absence of the sign is equally without significance. Moreover, where the heart is displaced considerably upward the absence of the sign is unreliable. Yet allowing for these limitations, a large number of cases remain in which its help is of value.

Of a total of 111 cancerous cases 97 (87 per cent.) gave the sign, whereas of a total of 107 non-cancerous cases only 18 (16 per cent.) gave it. In 50 cases definitely doubtful as to cancer examined, the cardiac sign proved wrong only in 6 per cent.

It has been suggested that the sign is no more than a corroboration of marked wasting. This is not true, for in non-cancerous wasting, even when extreme, the sign is rarely found; in carcinomatous wasting, even when marked, it is sometimes absent; in cancerous cases which have not wasted at all it is sometimes present, and the diminution of the dullness in cancer cases is not proportional to the wasting.

When the sign is present in a case of possible carcinoma, the diagnosis of carcinoma should be rejected only after careful consideration. In what must be, if carcinoma at all, a late case of it, the absence of the test strengthens considerably the hope of the absence of carcinoma. Cases are accumulating in which the sign appeared early enough to enable a successful resection to be carried out.—Gordon, in *The Bristol Medico-Chirurgical Journal*.

URINARY INCONTINENCE IN WOMEN, WITHOUT MANIFEST INJURY TO THE BLADDER.—Kelly and Dumm (*Surgery, Gynecology and Obstetrics*, April, 1914) report upon the method of treating urinary incontinence in

women which in their hands has yielded excellent results. They think the affection is due to a loss of elasticity and normal tone of the vesical sphincter, so well shown by the cystoscopic picture, which in many cases presents a gaping internal sphincter orifice which closes sluggishly as the cystoscope is withdrawn. The point of vantage toward which the operative treatment should be directed is the internal orifice of the urethra and the sphincter of the bladder. The operation which has been described by Kelly may be performed under local or general anesthesia, and is as follows:

A Pezzer catheter with a stem not over 5mm. in diameter is introduced into the bladder. With the patient in the lithotomy position and slightly elevated, the posterior wall of the vagina is retracted, and the area at the neck of the bladder is brought down by means of forceps or four tension sutures.

The next step consists in slitting the vaginal wall down to the urethra and the bladder in the median line for about 3.5 or 5cm. The neck of the bladder should fall at about the center of the incision. The position of the bladder sphincter is easily determined at all times by moving the catheter to and fro, and feeling its head, which presses closely against the urethra. The utmost care should be taken not to cut the urethra or bladder at any step of the operation. After making this median incision, the vagina is further detached on both sides with tissue forceps and scalpel or a blunt dissector, and dissected away for a distance of 2 to 2.5 cm. around the neck of the bladder. This may also be done with blunt pointed scissors, which push their way into the tissues, separating the bladder from the vaginal walls. The dissection should be deepest at the neck of the bladder. With the detachment of vagina from bladder completed, the finger should be able to grasp at least one-half or two-thirds of the neck of the bladder including the contiguous urethra. Sometimes the bladder wall is so thin in the median line, due to the rupture of its muscle fibers, that its mucosa shines through.

The torn or relaxed tissues at the vesical neck should then be sutured together, using two or three mattress sutures of fine silk or linen, passed from side to side: the first suture, taking in about 1.5cm. of tissue, is tied at once, and may be used as a tractor; the succeeding one is applied on the outside of this, further contracting and bringing together the tissues at the neck. This is the essential part of the operation, and when done the mushroom catheter should be removed. The head of the catheter escapes with a little jump as it clears the tightened, reconstructed sphincter area. The more or less redundant vaginal walls, which have been detached in order to expose the sphincter area, are now resected so that the remaining tissues can be snugly brought together from side to side, thus supporting the vesical area operated upon and avoiding dead space between bladder and vagina. This suturing is best done with a continuous fine catgut suture in one or two layers. In some cases it may be advisable to repair the relaxed posterior vaginal outlet.

The postoperative treatment is simple. The patient should not be catheterized unless it is imperative, although sometimes it must be done for several days, or even for a week. A Gatch bed with a half-way-up posture should be used immediately after operation.

Twenty cases have been operated upon for urinary incontinence, and of this number sixteen were successful. With the exception of one case in the list of patients designated as improved, all have practically complete control; yet an occasional incontinence on sudden exertion places them in the "improved" column. Communications have been received from all excepting three whose operations were performed two, nine, and thirteen years ago, respectively. They were discharged well.

There were four cases in which the operation was not successful. All were multiparæ. Three had previous operations: one, two unsuccessful plastic operations for incontinence; another, a perineal repair; the third, a vaginal suspension of the uterus, following which there was complete incontinence. Prior to operation incontinence was complete in three cases for periods varying from three to six years. The prognosis was exceedingly unfavorable in all, because of the presence of dense scar-tissue in the vaginal vault and at the site of the vesical sphincter.—*Therap. Gazette.*

TREATMENT OF SUMMER DIARRHOEA IN INFANTS.—Dr. H. C. Carpenter, in a very comprehensive and practical article on this subject in the July issue of the *Therapeutic Gazette*, states that the chief principles to be carried out in the therapeutic management of these cases in children are:

1. To clean out the gastrointestinal tract as quickly as possible.
2. To allow the digestive apparatus an adequate rest.
3. To remove if possible the cause of the illness so as to prevent a recurrence.

Success depends upon quick recognition and prompt treatment—that is to say, the immediate stopping of all food, the administration of a dose of castor oil, and the giving of an enema. A thorough cleaning out of the intestinal tract is most effectively accomplished by ordering not less than two drams of castor oil for an infant of six months. It is not desirable to prepare the oil in any way, although it will be more pleasant for the patient if given cold. If the infant is suffering from nausea, it is safer to give only a dram, but to repeat the dose in an hour. Castor oil has a well-known advantage over other purgatives, since it exerts a decided constipating effect after the initial purgative action. However, in vomiting cases, calomel in divided doses is given in preference to castor oil. The stock tablet triturate of calomel should not be ordered, but a prescription written so that the patient will receive a freshly compounded powder of calomel and soda in the dose of one-tenth of a grain of calomel every half-hour until ten doses have been taken. If by the time the powders have been consumed the vomiting has ceased, a drachm of castor oil may be taken. If, on the other hand, the vomiting persists after all the powders have been taken, it is better to stop temporarily all medication by mouth. It has been our experience that distinctly better results can be obtained from castor oil than by the use of calomel. One of the most common mistakes made is to feed the patient following the administration of a dose of castor oil. No food of any kind should be given for at least twenty-four hours following the oil. If the mother has made this mistake a second dose of castor oil must be ordered.

The diet for the first twenty-four hours following the purgative consists

of nothing but plain boiled water. This rule applies to babies of all ages, whether breast-fed or bottle-fed. Although plain water is to be preferred, if there is reason to think the mother may not obey the directions, believing that every time her baby cries it is from hunger, it will be safer to order barley water.

If the infant is vomiting it is best to give the stomach an absolute rest by withholding even water; but if there is simply nausea, water may be given in small quantities, a dram or two drams, at frequent intervals. If this is retained, the quantity may be gradually increased and the intervals lengthened. In all cases except those in which the stomach is affected water should be given freely—for instance, a four-months-old baby may have six ounces every three hours.

From this point on the treatment will differ, depending upon whether the baby is bottle-fed or breast-fed. First, we will consider the treatment of the breast-fed baby. It is exceptional for an infant whose mother nurses it to develop summer diarrhea, but when it does occur it is usually due either to the frequent nursing or to allowing the baby "tastes" of table food. It is a common belief that simply a "taste" of table food cannot possibly harm the baby, yet there can be no doubt that an enormous number of lives are sacrificed annually by this pernicious practice. Parents must be taught that every time the baby cries it is not necessarily from hunger, but more frequently from thirst, and that instead of feeding the baby it should be given a drink of water. Instruct the mother that all water for the baby must be boiled. During the twenty-four hours in which the baby is receiving only water the mother must not allow her breasts to become too full of milk. They must be emptied as often as it is necessary by means of a breast pump.

As the baby's condition improves the length of time allowed for each nursing may be gradually increased in most cases, until by the end of the week the baby will be permitted to nurse for fifteen minutes every four hours. If the four-hour interval of nursing is continued, with plenty of water between feedings, there will be very little likelihood of a return of the diarrhea. The mother must understand the importance of personal hygiene—the daily walk out-of-doors, freedom from worry, abundance of water (two quarts daily), avoidance of tea drinking, and the necessity of eating plenty of good nourishing food. Granted the real co-operation of the mother is obtained, a case of summer diarrhea in a breast-fed baby almost always makes a prompt recovery.

For the bottle-fed baby the treatment is much more difficult, but there are several methods of procedure which if carefully carried out will give good results. The secret of success depends upon scrupulous attention to every detail; in these cases there are no details which are unimportant.

In the treatment of an artificially fed infant suffering from summer diarrhea, the essential thing to remember is not to return too quickly to cow's milk—a common mistake, often attended with serious consequences. Milk should be withheld until the fever has subsided, and the stools have assumed a normal appearance. This always requires at least three days, and frequently it is desirable to keep the infant off of milk entirely for a week.

At the end of the twenty-four hours of water diet the infant is put on a thin barley water. If there is no vomiting he is allowed as much barley water as he will take every three hours. The proper method of preparing barley water is to add two table-spoonfuls of washed pearl barley to a quart of water and boil for three hours. Additional water must be added so that at the end of the three hours there will still be a quart. It is then strained and kept on ice. Barley water must be made fresh daily. If the infant refuses to take the barley water it can be made more palatable by the addition of saccharin, in the proportion of one grain to a quart of the barley water. Eventually the baby will tire of the barley water, so that it is well to vary the diet. Other foods which may be given are rice water, beef juice, broths, arrowroot gruel or a sugar solution, such as a five-per-cent solution of a reliable preparation of malt sugar. Rice water is made in exactly the same manner as the barley water, simply substituting the same quantity of rice in place of the barley. In making albumen water (the white of one egg to a pint of water) it is important that only very fresh eggs be used, as stale eggs will cause putrefaction in the intestinal tract. Where it is important to increase the nourishment as much as possible, the white of the egg may be added to the rice or barley water. Beef juice, a half to one ounce, which may be given once a day, should be made at home and only from fresh carefully selected beef. Broths in the small quantities in which they can be used have little nutritive value, and may have a slight laxative effect. However, one ounce of chicken or mutton broth may be added to each feeding of rice or barley water, simply to vary the diet, and this small quantity can do no harm.

Some physicians recommend the use of whey during this period of the treatment, but we believe it should not be used, as it has the same disadvantages as milk, being an excellent culture medium for bacteria.

Some or all of these foods, with the exception of the whey, may be used, alternating at different feedings or on different days until the stools have cleared up and the temperature has become normal; then, and then only, can milk be added to the feedings.

During hot weather even certified milk will be rendered a safer food by pasteurization. It is best to pasteurize the milk in the final container, which, of course, is the baby's bottle. This means that home pasteurization is to be preferred to commercial pasteurization. The most satisfactory method of pasteurizing milk at home is by the use of the Freeman pasteurizer. In the event of a Freeman pasteurizer being unobtainable, we recommend the following very simple, yet safe, method for pasteurizing the baby's food: Secure a large kettle with a lid—that is, one sufficiently large to hold all the bottles for a day's feeding and one gallon of water. Pour a gallon of water in the empty kettle and place it on the fire to boil. As soon as the water boils, the kettle must be removed from the fire and placed on a table with a plain wooden top. After it has stood precisely ten minutes uncovered, all the nursing bottles containing the day's feedings are placed upright in the kettle. The lid is then replaced, and the milk allowed to pasteurize for thirty minutes. At the end of that period the bottles are removed, cooled under running water, and placed in the refrigerator.

If certified milk cannot be obtained, all the milk used for the mixture

should be boiled for five minutes with frequent stirring. The milk mixture should then be prepared, poured into the feeding bottles, and then cooled by standing the bottles in running water.

In deciding how to start the patient on milk it is important to bear in mind the degree of digestibility of the different elements of milk. Arranged in the order of their digestibility they are: first, proteids; second, sugar; third, fat. We therefore endeavor to give the baby a food rich in proteid, containing only a moderate amount of sugar and very little fat. These requirements can best be secured by a mixture of skimmed milk and water. The skimmed milk is obtained by leaving the milk bottle containing the fresh milk on the ice for two hours, and then removing all the cream from the top by means of a sterile Chapin dipper. At the start only a very small quantity of skimmed milk should be given, and the amount gradually increased as the baby's digestive apparatus accustoms itself to the food. At first, only one-half ounce of skimmed milk is added to each feeding. The diluent used may be barley or rice water, but preferably a four-per-cent malt sugar solution. Then every third day, providing the patient's condition is satisfactory, another half-ounce of skimmed milk may be added, leaving out a corresponding amount of the maltose solution. In this manner the skimmed milk may be worked up to the amount desired, and when this has been reached the food may be further strengthened by the gradual substitution of whole milk in place of the skimmed milk. This also is accomplished by replacing every third day one-half ounce of skimmed milk with a half-ounce of whole milk.

THE SURGICAL TREATMENT OF TUBERCULOUS PLEURITIC EXUDATES.—Spengler and Sauerbruch (*Muench. med. Wochenschr.*) say that it has long been noted that the occurrence of a pleuritic exudate is followed by a marked improvement in the underlying tuberculous process. This is only in part due to the mechanical compression of the diseased lung; in part, the absorption of certain elements of the pleuritic fluid appears to lead to the increased production of immune bodies. The treatment of such exudates depends primarily upon the condition of the lung. If the pulmonary tuberculosis is incipient and localized in one apex or one hilus, and if the amount of fluid is not excessive, it is best to leave the exudate alone. In all cases of advanced tuberculosis, however, especially those in themselves suitable for artificial pneumothorax, the fluid should be partially evacuated and replaced by injected nitrogen gas.

FIVE HUNDRED EXAMINATIONS OF THE NOSE AND THROAT IN AN INSTITUTION FOR DELINQUENT BOYS.—Max Toeplitz (*Med. Rec.*, Mar. 14, 1914) in a review of the cases gives the results of such an examination. An abstract in the *Index of Oto-Laryngology* states: In summing up the results of these 500 examinations, 351 cases were diseased, 106 had enlarged tonsils, 89 enlarged adenoids, and 116 were combined cases. Of these 292 required operation, 23 refused it, 24 were operated on by radical methods.

Because of the apparent large number of operations, it was decided not to touch soft adenoids or small tonsils. As a result 40 per cent. of the cases treated by the physician during the year 1910 were attributed to the presence of adenoids and tonsils. The operative work was then ex-

tended in 1911, and 18.6 per cent. of the cases treated were traceable to the nose and the throat.

According to T. F. Harrington, adenoids and tonsils will heal themselves in four out of five cases if the child is given plenty of outdoor air. In view of this, 300 boys were re-examined after a year's stay under the most hygienic conditions. It was found that in only six of these had the tonsils and adenoids disappeared; that four not previously affected were now suffering, the remainder had finally to come to operation.

At the end of 1912 the general improvement in the hygienic status was marked, this being directly due to the operative work in 1911.

THE TREATMENT OF STILL BORN BABIES.—Dr. C. W. Hunt (*Charlotte Medical Journal*) states that dilating the rectum will often cause a gasp and start respiration when everything else fails. In this case it only did a little good and something else seemed to be the matter, and I saw that I was up against it. This baby was still born and very still, and perfectly blue. I dilated the sphincter repeatedly, and it produced a decided impression, causing efforts at respiration, but the machinery did not work. I found two obstacles which I think well worth mentioning: the throat and nose were filled with phlegm, baby could not breathe, this was removed, and the gasps for breath were a little bit improved, still the machinery automobile like, failed to work, without any known cause. During this time air was blown into the nose and mouth, face sprinkled with cold water, while baby was in a vessel of warm water, did every stunt in the way of artificial respiration, even held babe up by the heels, still the little fellow was very blue and we likewise. Next impediment, we found that the tongue was retracted and rolled back so that the baby could not breathe; pressing it down with the finger helped a little, but it filled the mouth too much, then we used the handle of a small spoon to depress the tongue and pull it forward, by a forward tuck with the curved end of handle; this was a great help and a few and better gasps were made.

I believe that a faulty position of the tongue is often a cause of failure to bring these babies to life, also the phlegm and mucous. While working with the spoon, and trying to blow in air at the same time, I said to myself (I always like to talk to an appreciative and good looking man) that I wished I had a spoon handle that was hollow, and that we should have an instrument of this kind always in our obstetrical bag. With an instrument of this kind we could blow in air, or better, inject air with a Davidson syringe while we depressed the tongue.

I took one side of an old stethoscope, the tube part, had it made straight, and large end flattened, and one half of the large end cut off, this left a little shoulder, near the end, giving a square edge with which to pull the tongue forward as it is depressed; as before stated the tube being hollow air can be furnished the baby while the tongue is depressed.

I believe that a great many still born babies fail to answer to our efforts at artificial respiration on account of mucous in mouth, throat and nose, and to retraction of tongue.

Another use for this instrument: the bulb that was on it to go into the ear, when used as a stethoscope, was removed and the threads cut off and the end made perfectly smooth, then the bulb was placed on as a mouth

piece when used to blow air into the mouth. When far from home and no catheter is in reach and the woman's bladder is too full, the bulb can be removed and the water drawn with this instrument, after proper boiling of instrument.

EFFECT OF ALCOHOL ON LONGEVITY.—In an address given by Arthur Hunter, actuary New York Life Insurance Company, at the Conference on Race Betterment, a synopsis of which is published in *American Medicine*, February, 1914, the effect of alcohol on longevity is considered. It is pointed out that the results of various tests made by Kraepelin and others into the effects of small doses of alcohol on muscular power, indicate that it has a detrimental effect. Opinions from famous soldiers like Kitchener and Roberts show that in warfare abstainers stand more hard work than those who drink in moderation. The popular opinion that more work can be done with alcohol than without it is not supported by the facts, and is doubtless due to the pleasant feeling of buoyancy which alcohol produces. As for mental efficiency, tests of translating from one language to another, of adding, of writing, of memory, etc., show a marked loss of efficiency through small doses of alcohol. The Rosanoffs contend that "alcohol impairs every human faculty that has been tested; the higher and more complex the faculty, the more pronounced is the effect." The opinions of the medical profession are in the main in the same direction, although attention is drawn to Col. C. E. Woodruff's paper on the beneficial effect of alcohol in the tropics. In order to demonstrate the effect of alcohol on mankind statistics are given of the mortality of men engaged in the manufacture and sale of alcohol. These men were insured by forty-three of the leading life insurance companies, and their habits at the time of application were considered satisfactory. The mortality shown in the following tables represents the extra mortality over the normal experience of these companies:

Liquor and Beer Saloons.—Proprietors and managers not attending bar, extra mortality, 82 per cent. Proprietors and managers attending bar, extra mortality, 73 per cent. Hotels with bar—Proprietors, superintendents, and managers attending bar, extra mortality, 78 per cent. The following deals with men who do not attend bar, although liquor is served on the premises: Hotels with bar—Proprietors, superintendents and managers not attending bar, extra mortality, 35 per cent. Restaurants with bar—Proprietors, superintendents and managers not attending bar, extra mortality, 52 per cent. Statistics were also supplied of persons in two other branches of the liquor business as follows: Breweries—Proprietors, managers, and superintendents, extra mortality, 35 per cent. Wholesale liquor houses—Proprietors and managers, extra mortality, 22 per cent. With regard to the formerly intemperate it was shown that the life insurance companies had experienced about 50 per cent. extra mortality among men who occasionally drank to excess more than five years prior to date of application, and had been temperate up to that time. The steady, so-called moderate drinkers, men who were considered average lives by the insurance companies, were found to have a very considerably higher mortality rate than among the more abstemious class.

A prominent life insurance company divided its policy holders into four

classes, depending on the extent to which they used alcohol. The following table gives the percentage of the mortality on the basis of the American table: Total abstainers, relative mortality, 59 per cent.; rarely use, relative mortality, 71 per cent.; temperate, relative mortality, 84 per cent.; moderate, relative mortality, 125 per cent.

In a table is given the extra mortality in the non-abstainers over the abstainers' section. United Kingdom—Temperance and General Provident Institution, extra mortality of non-abstainers over abstainers, 35 per cent. Scottish Temperance Life Assurance Company, extra mortality of non-abstainers over abstainers, 40 per cent. Sceptre Life Assurance Company, England, extra mortality of non-abstainers over abstainers, 50 per cent. Australia Temperance and General Life Assurance Society, extra mortality of non-abstainers over abstainers, 60 per cent. Manufacturers' Life Insurance Company, Canada, extra mortality of non-abstainers over abstainers, 75 per cent. The author is satisfied from a study of the foregoing statistics that total abstainers live much longer than non-abstainers. —*Medical Record.*

A SIMPLE METHOD OF USING IODINE VAPOR IN NOSE, THROAT AND EAR PRACTICE.—A. Maurice, in *Archives generales de medecine* for February, 1914, having observed how readily iodine vapor can be set free from iodoform by heating the latter with the electric cautery, states that he had constructed a very simple insufflator consisting of a small glass bottle, a rubber bulb and tube, and an ordinary electrocautery, the platinum extremity of the latter dipping down to the bottom of the bottle, while a convenient handle is attached to its other extremity. The whole apparatus which is light, is held by the operator by this handle, his other hand (or an assistant) manipulating the rubber bulb. The outlet for the iodine vapor is conical, so that a number of differently shaped and curved attachments can readily be adapted to it. Metallic parts are reduced to a minimum to avoid oxidation, even the conical outlet being of hard rubber.

With this apparatus excellent curative results can be obtained in a variety of conditions. In follicular tonsillitis, insufflation of a little nascent iodine vapor into the crypts through a small curved tube brings about prompt recovery. After a few insufflations the crypts are completely disinfected and tend to become smaller. The entire tonsil atrophies rather easily, the necessity for its surgical removal being thereby obviated. In maxillary or frontal sinusitis, after either catheterization through the natural channels, intranasal puncture, or alveolar penetration, the surfaces in these sinuses can readily be covered with a deposit of iodine through an antral or frontal cannula adapted to the iodoform bottle. The fungous covering of the lining membrane rapidly subsides, and the odor disappears generally after the very first sitting. In polypoid ethmoiditis the iodine vapor is insufflated at the middle meatus.

Suppurative otitis media, especially in its chronic form, is greatly benefited by the iodine treatment. With a small catheter, shaped like Hartman's cannula for irrigation of the attic, the iodine vapor can readily be introduced, even into the mastoid antrum.

In ozena, the treatment causes the odor rapidly to disappear, the secretions to become fluid, and the mucous membrane to return to its normal

color. Where the membrane is in an advanced state of atrophy and paraffin injections are no longer borne, the introduction of nascent iodine vapor causes a more rapid improvement than any other measure.

The author reports two illustrative cases of obstinate maxillary sinusitis and otorrhea, respectively, in which iodine vapor brought about prompt curative results—immediate deodorization and almost immediate arrest of secretion—where the ordinary procedures had failed.—*N. Y. Med. Journal*.

PYORRHEA AND THE GENERAL HEALTH.—In the *Glasgow Medical Journal* for June, 1914, Mr. David Glen had an article on the relation of pyorrhea to autointoxication, which bears out our oft repeated injunction, during the past decade, never to omit the teeth from a physical examination. Mr. Glen does not mention the constant flow of pus into the stomach during sleep, but he does emphasize how bacteria are squeezed out of the socket by loosened teeth during mastication, become mixed with masses of food too large to be properly digested by the gastric juice, and so reach the intestines before being destroyed. They may be present in too great numbers to be all destroyed or they may be washed down by fluid and passing through the stomach unaffected, reach the intestine still alive. To a normal mucosa they would do no harm, but in one damaged by distention or inflammation they find a suitable habitat in which to multiply; the ideal condition is found in subjects of chronic constipation. Before long a dilated cecum is produced, which is in due time followed by a distended duodenum; such changes do not take place in a few weeks or months, but are gradual, extending over years, and are primarily the result of carelessness with regard to the bowels. So long as that sewage purifier, the liver, is able to render innocuous the poison brought to it by the portal circulation, constipated individuals go on comfortably; but occasionally they have a "splitting" headache due to failure of the liver cells to transform a more concentrated combination of poisons, and after such failure occurs once, it is apt to recur again and again until a vicious circle is established, and the patients become the subjects of "bilious" vomiting and malaise, and subsequently of aches and pains in various tissues of the body. Blood in such an impure state is less effective in protecting the body against other microbes, such as the tubercle bacillus, and persons who formerly had no trouble with scratches and abrasions, now find that these nearly always suppurate.

Mr. Glen's treatment consists in keeping the intestinal contents moving more rapidly. Patients appreciate the benefit of aperients. Most of the dyspepsias are caused by this intestinal stasis, and so it comes about that many people pin their faith to some quack remedy, all of which remedies have as their most important ingredient some laxative medicine.—*N. Y. Med. Journal*.

HABITUAL CONSTIPATION.—M. Einhorn states that the importance of autointoxication has been exaggerated. Dunin, of Warsaw, was one of the first to emphasize the fact that nervous phenomena said to be caused by autointoxication, are not due to constipation, as such, but, quite the reverse, bring on the constipation. Constipation may develop as the result of the suppression through hurry or inconvenience of the normal daily

desire which is developed by training. Constipation may arise in otherwise healthy people through medication. Habitual constipation may be developed through dieting. Constipation can develop from a lack of fluids. One theory regarding the etiology of constipation is that the muscle of the bowel is thinner than normal, i. e., it is congenitally abnormal. Another theory is that constipation may be due to an abnormal position of the large bowel, either to a kink or a ptosis, or a too long colon. Adolf Schmidt brought out a new point, namely, that habitual constipation may be due to a better process of digestion and assimilation, so that there is very little fecal matter remaining. The author does not quite agree with him with regard to the general acceptance of this theory. While it is true that in habitual constipation the bulk of fecal matter is diminished and the absorption is very good, perhaps too good, this is not the cause of the constipation but rather the consequence. In the treatment of habitual constipation the first point is to reassure the patient and tell him that constipation is not such a great misfortune. One should try to interfere as little as possible and to bring back the lost habit of daily regularity. The diet should be arranged to facilitate the bowel movements. This is done in the majority of cases by giving bulky foods, fruit, and salads that contain a great deal of organic acids and cellulose, matter which is not digested, bulky foods serving to bring on more efficient peristalsis. Enough water should be given to the patient. Butter should be used freely. The author has prescribed a combination of phenolphthalein and agar, containing 3 per cent. of phenolphthalein and taken twice a day, or sometimes three times a day in teaspoonful doses. One advantage of these agar preparations is that the remedy in the agar does not come out quickly from the agar substance, but is absorbed slowly through osmosis, and in this way covers a large area of the intestine. A teaspoonful to a tablespoonful of liquid paraffin given twice a day acts well in some cases. There are physical means of treatment, hydrotherapy, exercise, massage of the abdomen, etc. Electricity has been successfully applied.—*Medical Record*.

SIX-HOUR STASIS.—A six-hour residue in the stomach is the best evidence we have of pathology somewhere. It is a perfectly definite thing—easily recognized. The normal limits of peristalsis or tone vary widely and it is often impossible to say definitely whether they are pathologic or not, but a residue is evident—whenever it is large enough to be recognized it means trouble. It represents the resultant of forces acting on the stomach contents; it is the balance between peristalsis and the resistance offered by the outlet. Normally tone and peristalsis will have overcome the sphincter and removed two or three ounces of bismuth from the stomach in three to five hours, so a residue means diminished emptying power or increased resistance at the outlet—usually the latter. Of course, it is essential that no food be allowed to enter the stomach during the six-hour interval or the bismuth remnants will be mixed with the meal and an apparent residue result. The commonest cause of a residue is pylorospasm, due most often to the irritation of a peptic ulcer near or upon it, but many other things cause pylorospasm reflexly. As Wm. J. Mayo said recently: "The stomach is the alarm box of the abdomen—the fire is often elsewhere in the

peritoneal cavity and the water is too often turned on the alarm box instead of the conflagration." Kaufman, in his presidential address before the Gastroenterological Congress in Washington last year, made the statement that there is no organ in the body, functional or organic disease of which will not eventually affect the stomach.

Cannon in 1905 showed that in cats, after intestinal section and anastomosis, peristalsis went on in the stomach as usual after the introduction of food but the pylorus remained tightly closed for six hours. He also showed that a drop of croton oil in the rectum or cecum caused prolonged gastric and ileal stasis. Some recent work by Baumstach (*Zeitschr. f. phys. Chem.*, 1913, p. 437) has shown that partly fermented mixtures introduced into the small intestine in fistulous animals produced gastric stasis where normal contents did not.

The Roentgenologists have seen a good many of these reflex spasms of the pylorus. George, Case, Barclay and others have seen them in ulcer, gall-bladder, and appendiceal disease, gastric tumors, renal calculi, pelvic affections, tabes, hysteria, hyperthyroidism, morphine and nicotine poisoning and oral sepsis.

At St. Luke's we have had 35 cases of six-hour residue since last fall—11 of them confirmed by operation or post-mortem, and in 14 others the diagnosis, both clinical and radiological, was reasonably certain.

Of the proven cases there were:

Duodenal ulcer	3
Chronic appendix	3
Cancer of fundus	2
Cancer of pylorus	1
Cancer of oesophagus	1
Sarcoma of liver (metastatic)	1

Including the cases before mentioned the series showed:

Duodenal ulcer	30 %
Cancer of stomach	25 %
Chronic appendix	17 %
Ptosis	11 %

and one case each of gall bladder disease, cancer of the esophagus, sarcoma of liver, benign stenosis of pylorus, partial obstruction of small intestine and morphine poisoning. I have also seen residue with tuberculosis of ileum, lues of stomach and pericolic membranes.—H. E. Ruggha, *California State Med. Journal*.

THE RECURRENCE OF ALBUMINURIA IN SUBSEQUENT PREGNANCIES.—Slemons says experience shows that there are cases in which recurrence of albuminuria is not noted in subsequent cases, while in other cases every pregnancy shows albuminuria even in more aggravated form. These cases may be judged as follows: In the former group the albumin disappears within eight days after delivery and the blood pressure returns to normal. In the second group six weeks or more elapse before the albumin diminishes or disappears. The blood pressure also more slowly falls. These are the cases which later relapse with more early and more severe albuminuria as the pregnancies multiply. A third, more unfavorable group of cases are those who have a chronic nephritis even without pregnancy.—*Obst. Zentralbl. f. Gyn.*, 1913, 1276.

THEODORE J. GRAMM, M. D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

APIUM VIRUS.—The stings of bees, hornets, wasps, yellow-jackets and other hymenoptera are of common occurrence. There are frequent cases of poisoning from these insects. While the ordinary bee sting is very painful and accompanied, usually, by local swelling and tumefactions, recovery results spontaneously within a few hours in the majority of cases. There are instances, however, in which stings have been fatal, the fatalities resulting from an unusual susceptibility of the one stung or from a powerful charge of the poison in the offending bees. Multiple stings occur sometimes when a number of bees attack an individual in concert; as, for instance, farmers in plowing in midsummer often disturb and tear up the nests of yellow jackets, who, in retaliation, inflict severe punishment upon both plowman and horses. Occasionally a hornets' nest is accidentally disturbed to bring upon the intruder violent hypodermic injections of virus from the hornets who have, justly, the reputation of being more poisonous than common bees. The physician is often called to appease the pains and swellings of persons who have been stung.

Nature of the Poison.—It is generally conceded that the principal toxic element of the venom of bees and their kindred is formic acid. Formic acid is also present in ants and similar insects. In fact, this particular acid is called formic on account of its occurrence in ants, from the Latin word *formica*, an ant. If ants and bees be distilled with water, formic acid may be obtained by making the proper chemical clarification. Formic acid is also the poisonous ingredient in "stinging nettles." Consider in this connection *Urtica urens*.

It must not be inferred that formic acid is all there is of *Apis mellifica* or *Apium virus*, which are compound biological products. The *Apium virus* is obtained by clipping off the venomous stingers of bees, while *Apis mellifica*, the original *Apis*, is obtained by trituration or macerating the whole bee. The common black honey bee is the one that should be used in preparing the homœopathic preparation, as the other breeds or strains of bees, now so common in apiaries, are not the ones that were used in making the provings.

There are cases reported in medical literature presenting very violent results from stings. For instance, one man received about one hundred stings from common hive bees. He experienced tingling sensations, violent cardiac palpitation, everything seemed to get black at once. His lips

and finger tips became cyanotic. He was so faint that his friends thought he was dying. Such a case demands antidotal treatment.

Antidotes.—Of course, local cooling applications will appease the burning and formication as well as the edema of the affected part. If the patient happens to be stung about the face sometimes the acute cellulitis is so great as to close the eye and contort the face. The local dropsy is pinkish or purplish. Rest in the cool shade with cold moisture applied to the face is indicated. In the center of the puncture made by the stinger there is often seen a little black spot which is the shaft of the stinger itself. This should be extracted by means of a small forceps. Ammonia moderately diluted applied locally, or an alkaline solution of carbolic acid applied in the same way will take the "fire" out of many insect and nettle stings. Alcohol in dilution may neutralize somewhat the effects of the poison. The bites of ants, bugs and caterpillars are treated in the same way as bee poisoning.

The constitutional symptoms that are sometimes induced by the virus under consideration would seem to be met by belladonna.—Dr. Albert E. Hinsdale, in *Medical Century*.

CHARACTERISTICS OF MEDICINES.*—(By Adolphus Lippe, M. D., Philadelphia, 1861.) Quite recently the writer was presented with practically all of the manuscripts, provings of medicines, homœopathic correspondence, &c., of the late Dr. Adolphus Lippe. It was entirely due to the generous act of Mrs. William A. Lippe, and insensibly grew out of the affection which has always existed between her family and my own. Many of these old letters are literally yellow with the lapse of time and some are of no mean interest, especially those of Dr. Rocco Rubini, Constantine Hering, Carroll Dunham and others. Rubini was a great admirer and his correspondence, with the original manuscript of the cactus grandiflorus in Italian is quite out of the ordinary. It is certainly surprising to realize in what affection Dr. Lippe was held by his patients and among them such men of intellectual refinement and broad culture as Horace Howard Furness, the Shakesperean scholar, our former British Ambassador Mr. Bayard, Phillips Brooks, Charlotte Cushman and many others. It was due not merely to his extraordinary ability in curing those afflicted by the blight of disease, but it was equally because of his true disinterested benevolence to all with whom he came in contact. At my request, Mrs. William Lippe has permitted me to publish some of this matter, especially that particularly bearing upon the homœopathic practice. The following is taken from an old manuscript and is dated 1861. From a casual glance it will be seen that it was a short and concise summary, possibly written for the doctor's own convenience or for headings in his lectures on materia medica.

Bovista.—Great weakness in the joints. Ebullitions with much thirst. Chilliness predominating during the pain. Dull instruments produce deep impressions on the flesh, for instance, the scissors on the fingers in using them. Pale swelling of the upper lip. Moist tetter.

Asafoetida.—Twitching and jerking in the muscles. Pricking (sting-

*In subsequent numbers of the HAHNEMANNIAN MONTHLY the rest of the remedies will be given in this short and useful method.

ing, darting pain). This is periodically present from within outwards, by touch relieved or changed. Sense of rigor. Body heavy and bloated. Pains on the inside of the joints of the limbs. Dark red, hot swellings. Hysterical attacks. St. Vitus's dance. Swelling of the glands. Painful inflammation of the bones. Caries, with thin offensive pus (tibia). Many symptoms appear while sitting, and are relieved in the open air.

Asarum Europæum.—Oversensitiveness of the nerves, the scratching on linen or silk is insupportable. Sensation of lightness in the limbs; when she walks, she thinks she is gliding through the air. Vomiting with violent retching and anxiety. Many symptoms disappear from washing the face in cold water, and from wetting the affected part. Aggravation—evening—in cold and dry weather.

Aurum.—Melancholy, fear even to suicide. Paralytic drawing in the limbs in the morning when awakening and on getting cold. Pain in the bones at night. Great ebullitions and palpitation of the heart. Oversensitiveness to all pain and to the cold air. Desire for the open air. Hysterical spasms with laughing and crying alternately. Inflammation of the bones-carries (palate and nasal bones). Bad effects from the misuse of mercury. Offensive breath. Aggravation in the morning on getting cold, while reposing. Amelioration from moving, while walking and on getting warm.

Baryta Carbonica.—Mistrust, want of self confidence and aversion to strangers. Tension and shortening of the muscles. Heaviness of the body. Pains in the joints and bones. Tearing in the limbs with chilliness. Swelled and indurated glands. Emaciation with bloated face, swelled abdomen and difficult learning in children. Great liability to catch cold (sore throat, stiffness of the neck, diarrhœa). Great weakness of mind and body of old men. Paralysis and palsy of aged persons. Aggravation while sitting or lying on the painful side.

Bismuth.—Sensation of heaviness in inner parts. Screwing pains. Pressing-tearing in the bones of the hands and of the feet. Pressing pain (eyes, head, abdomen, testicles). Vomiting of all fluids (children). Most symptoms disappear during motion.

Borax.—Stinging, or drawing stinging pains. Weakness in the joints. Nausea and giddiness from exertions of the mind. Aphthæ (mouth and tongue) which bleed easily. Parts which are usually red, turn white. Unhealthy, easily suppurating skin. Aggravation from descending (fear of falling in children when they are carried downstairs)—from laughing, or after menstruation.

THE MODERN TREND IN THE PRACTICE OF PHYSIC.—In the *Medical Century* of recent date, Dr. E. Petrie Hoyle, of London, calls attention to the fact that certain "original research," reported at the meeting of the New York Academy of Medicine, presented by Drs. Alexander and Bullowa discloses the intelligence that:

"If one examined the suspension of any fine powder with an ordinary microscope, the individual particles exhibit a slight trembling motion known as the 'Brownian Movement.' Although this movement is more marked in the case of small particles, it is not sufficient to keep them afloat, and they gradually sink out of solution. But with the ultramicro-

scope it has been demonstrated that with increased subdivision (our further trituration), the motion of the sub-divided particles continued to increase in speed and amplitude, until it became so vigorous and extensive that the particles no longer settle but remain permanently afloat; that is, they have now what is termed a colloidal solution. If the subdivision (our higher trituration) is proceeded with still further, they gradually pass into the sphere of true crystalloidal solutions, wherein the particles of the dissolved (trituated) substances are reduced to molecular dimensions, or even split up into ions."

The microscope thus vindicates, curiously enough, the statement of one whose mental vision and scope were of such transcendent fibre that he appears gloriously independent even of that remarkable instrument to verify the bald point of truth. The lack of illuminating condensor and objective seems to have placed no unsurmountable barrier to the mental grasp of Hahnemann and we cannot help smiling at his uncanny astuteness at another time when he branded the etiological factor in the causation of cholera—"a living miasm." When Hahnemann refers to the spirit-like vital force and the spirit-like power developed in the drug by potentiation what does he mean but an inherent healing power liberated by the casting off or breaking up of the coarser envelopes or material particles of the drug, which liberates those finer forces that are vibrating and pulsating with a rapidity which enters into correspondence with the invisible, unweighable, imponderable essence of life itself? Thus is liberated the "spirit" of the drug, which when applied to the well defined law of similars becomes an unfailing source of power for the healing of the sick. The requisites for homœopathic prescribing are:

- (1) The law of cure.
- (2) The single remedy.
- (3) The minimum dose.

All of these items must enter into every correct prescription. It is interesting also to recall that the order in which the above requirements are enumerated are exactly that followed in their development. Hahnemann developed to its most marked extent the law of similars. His experiments to obtain the pathogeneses or sick-making powers of drugs naturally led him to apply them singly in disease, that he might approach as closely as possible the correct correspondence. Finally the adoption and recommendation of the minimum dose was the result of the oft-verified observation that, in order to avoid exacerbation and at the same time to expedite cure in a direct, rapid, and permanent manner the drug must be administered in the smallest possible amount, duly commensurate with its power of exciting similar symptoms in the healthy. In this connection the drug, if properly chosen, exhibits the power of exerting a correspondingly strong reaction of the vital force in the direction of health. Such a system of therapeutics, embracing as it does the most careful individualization of the case in hand as to its origin in hygienic, dietetic psychic or medicinal (abuse of drugs) causes, cannot be any other than the broadest, most truly scientific and all-inclusive system of healing known to the health-seeker of the future.

MEDICATION FOR PRURITIS.—Dr. Ralph Bernstein has recently called at-

tention to two remedies often called for in itching states which are met with in diseases of the skin. One is *dolichos pruriens* (cowhage) and the other is *fagopyrum esculentum* (buckwheat). *Dolichos* 6x and *fagopyrum* 12x he uses in the treatment of senile pruritus and considers the same of great value in itching without eruption. *Dolichos* presents an aggravation after mid-day and this is particularly seen at the elbows and knees. Those parts of the body covered with hair are the most involved. The patient obtains relief of a temporary nature by scratching. The pruritus of *fagopyrum*, in contradistinction to that of *dolichos*, is aggravated by the scratching. Generally some small red spots show themselves here and there on the skin provoking a painful sensation.—Ralph Bernstein, *Journal of the American Institute*.

THE STUDY AND TEACHING OF MATERIA MEDICA.—Of all the branches of medical study probably none has so bewildering an aspect when first introduced to the medical student as has *materia medica*. He has a limited knowledge of general medical science, and is unable to grasp the practical significance of most drug phenomena as represented in a proving. He is accustomed to think of individual drugs as being useful in certain diseases or conditions, and has only the vaguest idea of what the homœopathic relation between drug action and disease consists. When studying a proving, the symptoms caused by drugs appear as a mass of dry facts, but remotely attached to these things of human interest which aid the memory in retaining them. The multiplicity of symptoms confuses the mind. Even a physician trained in the study of *materia medica* has only a partial understanding of a drug until he has added clinical experience to the proving. A complete understanding includes the proving plus the accumulated verifications of other observers. The function of the *materia medica* as far as the imparting goes is so to interpret the action of drugs that the student can in the easiest manner gain a comprehensive idea of the principal action of each and remember the most prominent symptoms and modalities. There is in each drug a single, predominant, definite character of action, which can be vividly expressed in a few descriptive words. Thus in *belladonna*, its central action can be characterized as acutely and violently congestive. It has a selective action on the brain. Consistent with this fact it acts with less intensity on animals than on man. However, in the case of man and frankly related with its type of congestion is the suddenness of onset, the bright scarlet color of its inflammation, its throbbing pains, its distraught deliriousness, and last but not necessarily least its aggravation from holding the affected part down. If the deadly nightshade be only studied after such fashion the prescriber may lay down a certain foundation for truly accurate work in practice. In fact, as each symptom can be traced back to a single trend of action, so can a knowledge of the direction of action of a drug lead by induction to many of its important symptoms. The essential relation between the remedy and the disease is that the character of reaction which the drug causes coincides with the reaction which the organism is attempting. Unless this last is a sentient thought in the mind of the prescriber, the real significance of the symptom is quite lost. Of course the central action of all drugs is not easy to define, but careful study always brings

out one predominant thought in connection with each. As an instance, take *nux vomica*. One poisoned by this drug is rapidly thrown into intermittent, tetanic convulsions, which are excited by the least touch or sound, of even a slight draft of air. If one should start with a picture in mind of such an individual, with the head and heels drawn back so that the victim is in the position of *opisthotonos* and the same associated with a facial contracture, known as the hideous grin or "*risus sardonicus*"—then will he have gone a long way in realizing the sick-effecting influence of *nux vomica*. From this it will be seen how over-impressionability of the senses, and exaggerated response to external stimuli, enter the mind at once as descriptive of the action of this drug. With this, as a starting point, every symptom of *nux vomica* can be traced back to a common origin. The action on different parts of the body can almost be known by the process of deduction, for every function is disturbed exactly in accordance with the direction of the general action. *Ignatia* contains the same alkaloids, and its central action is the same, only the impressionability is heightened, so that the mental irritability of *nux vomica* is replaced by grief or hysteria in *ignatia*.

GUY BECKLEY STEARNS, M. D.

PROVING OF DIOSCOREA VILLOSA.—John R. began the proving 5-14-'14. Started at noon of that day. He did not know he was making a proving. Medicine every half hour.

5-15-'14. Feels a splashing, like water in the stomach. Has a hollow feeling there. Sleep, bowels and urine the same.

5-16-'14. Hollow feeling in the stomach gone. Pressing, tight feeling cutting off his wind at the epigastric angle. This was quite constant. He experienced it at the end of the sternum. When reading a black speck suddenly comes before the eyes—like a flash—then he misses the letters. Bowels, sleep, eating, urine all the same as usual. A swimming in the head which he complained of before the proving began, is a trifle improved.

5-18-'14. *Pressing and tight feeling all along the sternum. It does not hurt to breathe. The chest does not seem to expand on breathing.* Bowels the same. Slept poorly last night. Urine clear and same amount voided. Swimming in the head still better.

5-19-'14. *Noisy feeling in head.* Stomach feels heavy. Is uncomfortable. The bowels and urine unchanged. Slept well last night.

5-21-'14. *Can't take a deep breath. Chest does not expand. No pain in the condition. It just seems unable to give on inspiration. Short-winded through the chest because of non-expansion. A buzzing like a bee in the head. This nearly all the time.* Bowels and urine the same. Stomach in excellent shape. General strength fine. Pressing feeling in the stomach gone.

5-22-'14.—*Short winded in chest still. No expansion in breathing. Noisy buzzing in head.* Eats and sleeps well. Urine same.

DONALD MACFARLAN, M. D.

COFFEA CRUDA.—(Translated from the French of M. le Dr. Leon Vannier). *Characteristics.* Hypersensibility of all the senses with exagger-

ated activity of the mind and body. Impressionability more peculiarly to pleasurable impressions.

Modalities. Aggravation by emotion of an excessive character (joy, surprises, etc.), by cold, by open air and by night. Also an aggravation from powerful odors, narcotics, wine and even from touching. Amelioration by warmth (except in case of toothache which is relieved by cold application). In lying down.

SYMPTOMS.

Type. The type is that of the tall spare, bent-over individual with a brownish skin. They are temperamentally choleric and sanguine.

Nervous System.—Extraordinary activity of mind as well as body. Full of ideas and quite unable to banish constant thinking and imagining; very active, always in motion. Very imaginative, constantly building up schemes for the future. Very impressionable and the mental impressions are very active. Excessive joyousness. The disposition is very whimsical; the patient is more or less given over to alternating fits of crying and laughter. There is present, in point of fact, what might well be termed a hyperacuity of all the senses. He is able to read readily the smallest type. He is quite sensitive to odors of a penetrating character and the hearing takes in the least noise. The latter even extends to imaginary noises. There is marked insomnia. Patient is always awake and it is an impossibility to close the eyes in sleep. There is a physical excitation consequent upon the exalted mental state of the individual. The person is kept awake the night through revolving in mind all sorts of plans and formulating all kinds of different projects. Coffee is also of value in the sleeplessness of children who keep awake all night, excited and wishing to play.

Sensibility. Extreme hypersensibility to pain. Very intense neuralgic pains causing the afflicted one to despair and causing him much anxiety. Generally provocations by cold. There are aggravations by noise.

Head. Headache aggravated by all mental exercises, thoughts, and conversation. It is worse on one side (hemicrania) and there is a sensation as if a nail were driven into the brain. Noises in the head. The patient hears cracklings in the head. Cracklings or bubblings in the occipital region.

Face.—Neuralgias of the face. Red face in coffee-drinkers.

Extremities. Crural neuralgia aggravated by movement, after mid-day and night, ameliorated by pressure, aggravated by noise.

Digestive Apparatus. Toothaches, temporarily relieved by ice-water in the mouth. Eats and drinks very rapidly. Hypersensibility to wine.

Genital Apparatus. Women. Periods ahead of time and of too long duration. Dysmenorrhea, with intolerable pains and large clots of black blood. Hypersensibility of the vulva and vagina. Is unable to support a napkin. Voluptuous itchings.

Comparisons as seen by Dr. Vannier are aconite, chamomilla, cypripedium, ignatia and nux vomica.

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ACTION OF ALCOHOL ON FUNCTIONS AND TISSUES OF THE BODY AND A DISCUSSION OF VALUE OF ALCOHOL AS A FOOD.

BY

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(Read before the Homoeopathic Medical Society of the County of Philadelphia.)

SINCE I shall consider the action of alcohol on functions and tissues of the body and discuss the value of alcohol as a food from the chemical and pharmacological standpoints it is desirable to first present some of the salient underlying points in chemistry and pharmacology that are involved.

All the multitude of complex chemical compounds intimately associated with life and commonly known as "organic" compounds invariably contain carbon, although our body contains many simpler compounds which do not contain carbon and are simply combinations of various metals with acids.

There are three main classes of "organic" or carbon compounds that should be mentioned—hydrocarbons, carbohydrates, and proteins.

Hydrocarbons are chemical compounds consisting of only carbon and hydrogen. Several well defined series are known, such as the marsh gas series having a general formula of C_nH_{2n+2} and the benzene series having a general formula of C_nH_{2n-6} . Although there are a considerable number of hydrocarbons there are many more derivatives of them which are formed by replacing one or more of the hydrogen atoms with some other element or group of elements. Thus the hydrocar-

bons of the marsh gas series are methane, CH_4 , ethane C_2H_6 , propane C_3H_8 , butane C_4H_{10} , pentane C_5H_{12} , hexane C_6H_{14} , etc., the first four being gases and the others named are liquids, while some of the very high members of this series are solids. Methane and ethane are present in considerable quantities in illuminating gas, pentane and hexane in gasoline and paraffin wax is largely composed of some of the very high members of this series.

When one of the hydrogen atoms of the hydrocarbon is replaced with an atom of chlorine, we have methyl chloride CH_3Cl , ethylchloride $\text{C}_2\text{H}_5\text{Cl}$, etc., and when one of the hydrogen atoms of the hydrocarbons is replaced with a group of elements consisting of one atom of hydrogen and one atom of oxygen (hydroxyl group) we have methyl hydroxide or methyl alcohol CH_3OH , and in a similar way ethyl hydroxide or ethyl alcohol $\text{C}_2\text{H}_5\text{OH}$, butyl alcohol, pentyl alcohol, etc. Methyl alcohol is known as wood alcohol, ethyl alcohol as grain alcohol and pentyl alcohol as fusel oil.

Many other alcohols besides the ones mentioned exist, for example, phenol $\text{C}_6\text{H}_5\text{OH}$, commonly called carbolic acid, is an alcohol derived from the benzene series. Glycerin $\text{C}_3\text{H}_5(\text{OH})_3$, may be considered as an alcohol derived from the marsh gas series by replacing three of the hydrogen atoms in propane with three hydroxyl groups. Glycerin is the basis of fats because fats are combinations of glycerin and complex organic acids also derived from the marsh gas series, with one important exception (olein).

When the term "alcohol" is commonly used ethyl or grain alcohol is understood and the United States Pharmacopœia, which is the legal standard in this country, gives tests for purity and strength to which "alcohol" must conform. Suffice it to say that "alcohol" must contain at least 94.9% by volume of absolute ethyl alcohol and conform to certain tests for purity. "Absolute alcohol" is also recognized by the United States Pharmacopœia and must not contain over one per cent. of water. "Dilute alcohol" is a liquid made by mixing equal volumes of "alcohol" and water and is practically the same as "proof spirit" upon which basis the United States Government collects its revenue while the alcohol is under bond in the distillery.

More than the simple statement that alcohol is prepared from fermented grain by distillation is superfluous, however it may

be of interest to state that the quality of ethyl alcohol produced in this country is as good as any produced commercially in any country in the world.

Some idea of the amounts of alcohol in various alcoholic drinks should be kept in mind.

Whisky and brandy usually contain from 45 to 55 per cent. of alcohol.

Gin usually contains from 60 to 70 per cent. of alcohol.

Rum is the distillate from fermented molasses and usually contains even more alcohol than whisky.

Wines usually contain from 10 to 15 per cent. of alcohol unless they have been "fortified," when they may contain considerably more alcohol.

Beer, ale, stout, and porter are "malted liquors" and usually contain from 3 to 7 per cent. of alcohol.

The second class of "organic" compounds I wish to mention is the carbohydrates. These chemical compounds not only contain carbon and hydrogen but also oxygen, and usually the number of hydrogen atoms is twice as great as the number of oxygen atoms. The carbohydrates are closely related to each other and many of them are important foods. Sugar and starch are carbohydrates.

Proteins, the third class, are still more complex and all contain nitrogen in addition to oxygen, hydrogen, and carbon. The basis of both the animal cell and the vegetable cell are proteins and the phenomenon of life is intimately associated with the ever-changing alteration in the composition of these complex substances.

None of the proteins are soluble in alcohol and alcohol will alter (coagulate) all of them.

If the white of an egg, which contains considerable amounts of proteins (albumin and globulin) is treated with alcohol the proteins coagulate much as they do when an egg is heated. This one fact in itself should be sufficient evidence to convince anyone of the harmful nature of alcohol.

In order to supply the human body not alone with material to produce heat and muscular energy, but also with suitable material to replace and produce more tissue, food is necessary. A food may only be capable of supplying heat or muscular energy and be incapable of replacing or forming new tissues. Carbohydrates and fats can produce heat and muscular energy, but both are absolutely powerless to repair or form new animal

cells because proteins are the basis of the cell and neither fat nor carbohydrate contain any nitrogen, the characteristic elemental substance of proteins.

Fats and carbohydrates are as powerless to replace proteins as a shipbuilder would be to replace a steel propeller without using any iron. This analogy is especially fitting because crude iron would not be suitable for a propeller unless it was first made into steel by the addition of carbon under definite chemical conditions. Nitrogen of the air can not replace tissue unless it is first combined with the elements carbon, hydrogen and oxygen and further shaped by the chemical processes of the metabolism.

It is true that the protein of a cooked egg is probably as valuable as a food as a raw egg, but alcohol, when taken into the stomach not alone acts on the food there but on all the proteins in the cells of the tissues with which it comes in contact. No one would question that it would be harmful to sear the cellular tissues lining the alimentary canal with an electric needle, yet the action of alcohol on these same cells is strangely similar.

Alcohol does act as a food in the sense that it is capable of undergoing digestion and absorption and its stimulating properties (perhaps due to irritation) may be acknowledged, yet there is sufficient scientific evidence presented each year against alcohol to invalidate all the claims alcohol has to its value as a food.

About ten per cent. of the alcohol taken into the stomach is absorbed from that organ and about seventy or eighty per cent. is absorbed from the intestine. Most of the alcohol absorbed is promptly oxidized, but some is eliminated with the expired air, some by the kidneys and a small amount is circulated through the blood.

Dr. Hanzlik, of the Western Reserve University, states that alcohol prevents to a considerable extent the important absorption of food from the intestine even when the alcohol is injected directly into the veins. (*Cleveland Medical Journal*, Vol. 12, page 274).

Dr. D. B. Nice, of Harvard, recently made extensive, important and instructive experiments to show the effects of alcohol on white mice. He took mice of the same age and sex which were all direct descendants of the fourth generation of a single pair of white mice. One series of white mice received alcohol for their drink and every second day three cubic centimeters

of 35% alcohol was placed on their crackers. The agility of the mice was measured by means of revolving drums having recording devices attached to each cage. The mice which were fed alcohol had only 73% as much agility as the control mice. (*Journal of Exp. Zoology*, Vol. 81, page 99).

Alexander Langgaard has determined the toxicity of alcohol on rabbits. Doses of 3 c.c. per kilo body weight killed after 26 doses; doses of 5 c.c. per kilo killed after 12 doses; doses of 6 c.c. per kilo killed after 9 doses, and a single dose of 14 c.c. per kilo was fatal on fourth day. (*Berlin Klin. Wochschr.*, Vol. 49, page 1704).

Drs. Stockard and Craig, of Cornell University, have demonstrated the harmful effect of alcohol on the germ cells and the developing spores. Guinea pigs were intoxicated six days each week by putting them in a tight box with alcohol vapor for about one hour. The pigs were mated with normal pigs and with each other. Of forty-two matings among pigs one or both of which had been treated with alcohol only seven young pigs were produced, of which six were "runts." Nine mating among normal pigs produced seventeen healthy young pigs. (*Arch. Enlwické Orgon.*, Vol. 35, page 569).

In the spirit of perfect fairness it must be acknowledged that alcohol has some actual claim to its reputation as a food. One gram of alcohol will produce 7.1 calories of heat while one gram of carbohydrate or protein will only produce 4.1 calories and one gram of fat will produce 9.3 calories. In addition, alcohol will prevent the utilization of carbohydrates and of fats under certain conditions and permit the fats and carbohydrates to be stored in the body for future use. The digestive and absorptive apparatus very quickly transform alcohol into energy, but it has been scientifically demonstrated that fatigue follows much quicker after alcohol than without alcohol, and that other disadvantages make the value of alcohol as a food negligible. Alcohol can not be considered as a food because its chief action is as an intoxicant and its use leads to a vicious habit. It is a habit-forming drug.

After years of painstaking scientific investigation the German Government have even ignored the virtues of alcohol as a stimulant and have substituted sugar and sweet chocolate for alcohol. Zuntz and Schumberg made a study of the temperature of soldiers during marching. They found that a soldier could carry a load of 22 kilograms for 20 kilometers without

any rise in temperature, but that if their march had been preceded by a drinking bout the body temperature rose to 103° , and in some cases as high as 105° F.

I shall not consider the effect of alcohol upon the mind and the terrible moral depravity it produces. Many of us would like to forget these deplorable effects upon the human race. Every young man who thinks he can "take a glass occasionally to be sociable" should spend a Saturday evening in the emergency ward of a large city hospital. If the sights there would not convince him of the grave danger he is in he should be executed. Simply a knowledge of the dangers of alcohol will never be sufficient to turn young men away from alcohol because every young man courts danger, that is characteristic of youth. Perhaps sufficient fear of the consequences of an alcohol habit and inability to obtain a position with a corporation that insists on having men who do not use alcohol do more than any other two things to protect our young men from the dangers of alcohol.

IRREGULARITIES OF THE PULSE: THEIR RECOGNITION, SIGNIFICANCE AND TREATMENT.

BY

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(Read before the American Institute of Homœopathy, June, 1914.)

THE discoveries that have been made during the past decade relating to the detection and significance of irregularities of the pulse have been of vast importance to the internist and to the therapist.

The researches of Engelmann and of Gaskell into the physiology of the heart muscle and the subsequent clinical investigations of Mackenzie and others, have made what was formerly a hopeless mass of conjecture and doubt one of the most definite and significant of all the phenomena associated with cardiac diseases.

Any attempt to understand the mechanism and the significance of cardiac irregularities must be based upon a study of the structure and function of the cardiac muscle. It will sim-

plify matters a great deal if we will look upon the heart merely as a muscle, certain functions of which, it is true, have been specialized to a peculiar degree, but to all intents and purposes it possesses all the essential properties of any other muscle and, must be nourished, rested and exercised, if its functions are to be properly developed and maintained. Careful research has shown that the muscle fibers of the heart are arranged in the form of spirals, in definite order or layers and these layers are attached chiefly to the central fibrous body and to the more or less firm rings about the valves.

Each fibre of the heart muscle possesses the following functions:

- (1) Stimulus production.
- (2) Excitability.
- (3) Conductivity.
- (4) Contractility.
- (5) Tonicity.

A special group of fibers located near the orifice of the superior vena cava, possesses the function of excitability to an unusual degree. This structure is known as the *sino-auricular node*. The rate and rhythm of the heart depend chiefly upon the manner in which this structure performs its function and it has aptly been called the *pace-maker* of the heart. Another important specialized set of fibres is the *auriculo-ventricular band*, or Bundle of His, which arises in the right auricle and passes inward toward the interventricular septum near which it divides into two branches, one of which ramifies in the right ventricle and the other in the left ventricle.

Under normal conditions the contraction of the heart starts at the sino-auricular node in the right auricle and is communicated in the left auricle. The impulse to contract is then carried downward through the Bundle of His to the ventricles. *Should the impulse to contract originate in any other part of the heart than the sino-auricular node or should the normal transmission of this impulse be interfered with we have cardiac irregularity manifesting itself.* In practical work we meet with four important types of irregular pulse:

- (1) Sinus irregularity.
- (2) Extra systoles.
- (3) Auricular fibrillation.
- (4) Heart block: partial or complete.

A few other forms of cardiac irregularities are occasionally

encountered, but on account of their rarity we shall give them no consideration in this paper.

SINUS IRREGULARITY.

This form of irregularity is characterized by the varying length of the cardiac cycle, particularly by the lengthening of the diastolic period, the beats being of equal size and varying with respiration. This type of irregularity is readily recognized by the finger on the radial artery. It will be observed

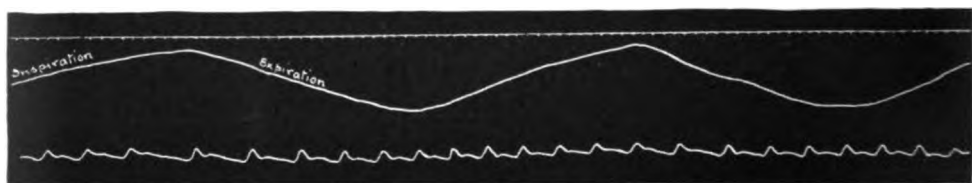


Fig. 1. Sinus irregularity—note slowing of beats at the beginning of expiration (After Mackenzie.)

that the pulse rate is continually changing, *becoming slower during expiration*. The beats are equally strong and there are *no missed beats*. See Fig. 1.

Polygraphic tracings taken from the radial artery and the jugular pulse will readily enable us to corroborate the diagnosis.

The significance of this type of irregularity is now quite clearly understood. *It is dependent upon depression or excitement of the sino-auricular node through the action of the pneumogastric nerve*. It is found most commonly in children, at times in nervous adults and often appears after an attack of rheumatic fever. It has little pathological significance as far as the heart is concerned and is perfectly consistent with good health unless other evidence of cardiac failure exist in connection with it. The patient can be assured that the condition is not serious and that a cure may be confidently expected.

Treatment: The general care of the patient affected with this condition should consist in the institution of such dietetic and hygienic measures as are calculated to improve the general health of the individual. Cactus, gelsemium, nux vomica and ignatia, are all remedies of value in bringing about a cure.

EXTRA SYSTOLES.

Extra systoles constitute a large proportion of the cases of the cardiac irregularity that we meet with in ordinary practice. They are recognized by a premature beat in the radial pulse, followed by an abnormally long pause. See Figs. 2 and 3. The diagnosis is readily confirmed by a polygraphic tracing, or by auscultation or with the stethoscope. By the latter means the extra systole is recognized by a regular sequence of sounds



Fig. 2. Extra-systoles—note the strong contraction following the long pause.

interrupted by two short, sharp beats occurring during the intermission of the pulse and followed by a long pause.

Extra systoles are produced by a premature contraction of an auricle or ventricle, in response to a stimulus from some abnormal point, but where otherwise the normal sinus rhythm is maintained. The long pause following the extra systole is due



Fig. 3. Extra-systoles occurring after every four normal beats (After Mackenzie).

to the fact that the heart muscle is in a refractory stage when the normal sinus impulse reaches it, hence no contraction takes place. The first systole that occurs after the compensatory pause, takes place exactly at the moment at which it would have occurred had no extra systole preceded it, and is usually more forceful than a normal beat due to the lengthened period of rest.

Extra systoles may be of three types: Ventricular, auricular and nodal. The manner of differentiating these various types

is of scientific rather than of practical importance and need not be elaborated upon at this time.

The symptoms produced by extra systoles in the majority of people are few. Some persons are conscious of a transient flutter when the extra systole occurs. Others say they have a sensation as if the heart had stopped, while others complain of a distinct thud after the long pause. Shortness of breath and oedema of the extremities are present in only a small percentage of cases. Precordial pain may or may not be present.

The significance of extra systoles varies. They are found, not uncommonly, in healthy men and women without producing any impairment of the efficiency of the heart. In other persons they may be indicative of more or less serious changes in the heart muscle, but in such cases other evidence of cardiac failure will invariably be found. It may be stated, therefore, that when extra systoles are the only evidence of disturbance the prognosis is favorable; where they are associated with other signs, the prognosis should be based on the other signs.

Treatment: In instituting treatment in a case of this type, it is important to reassure the patient as to the condition of his heart and to explain that there is no danger in this type of irregularity per se. Attention to the food and to the digestive organs is a matter of considerable importance. Tobacco, tea and coffee, not uncommonly are factors in the production of extra systoles and should be omitted from the diet. All food that tends to set up digestive disturbances or flatulent dyspepsia should be excluded. Rest is not essential except in cases presenting evidence of circulatory failure. The medical treatment of these cases should be strictly homœopathic. No physiological remedy has any particular effect in controlling this type of irregularity. Cactus, crataegus, gelsemium, digitalis, china, phosphoric acid, ferrum and arsenicum are remedies that are frequently called for.

AURICULAR FIBRILLATION.

This condition, which was practically unheard of until two or three years ago and which owes its recognition to the work of Lewis and MacKenzie, is, clinically, the most important type of cardiac irregularity. *The discovery of its mechanism and significance is by far the greatest advance that has been made*

during the past fifty years in the diagnosis and treatment of cardiac lesions.

A typical case of auricular fibrillation is readily recognized. Palpation of the pulse shows its rate to be greatly increased, usually over one hundred per minute. The normal rhythm is completely destroyed. The interval between the beats and also the force of the beats vary constantly. In milder cases the rate of the pulse may be comparatively slow and a polygraphic tracing of the radial and jugular vessels may be necessary to reveal the true nature of the irregularity. See Fig. 4.

Auricular fibrillation is dependent upon an independent and rapid contraction of the fibers of the auricle. The walls of the auricle stand in the diastolic position and, while there is no



Fig. 4. Auricular fibrillation occurring in a case of mitral stenosis.

actual systole, constant twitchings are observed over its entire surface. As the result of this twitching, the ordinary rhythm of the heart is completely lost, the stimulus for contraction no longer arising in the sino-auricular node, but in the fibrillating fibers of the auricle and transmitted to the ventricles in an irregular manner.

The symptoms presented by the patient suffering from auricular fibrillation are numerous; he is usually definitely conscious of the irregular movements of the heart and a variety of symptoms indicative of cardiac failure are invariably present, such as shortness of breath on exertion, oedema of the lower extremities, vertigo and enlargement of the liver.

While in the majority of cases, the onset of auricular fibrillation is gradual, in a small percentage of cases it is rapid and may be accompanied by dilatation of the heart and extreme dyspnoea.

Auricular fibrillation is always a condition of serious significance, indicating as it does a profound disturbance in the function of the heart muscle. It interferes seriously with the maintenance of the circulation and if it persists for any length of time circulatory failure is practically certain to occur. In attempting to form a prognosis in auricular fibrillation we should

investigate carefully the nutrition of the heart muscle, the manner in which it responds to strain, the general condition of the patient and the effect of appropriate therapeutic measures upon the rate and rhythm of the heart.

Treatment: When a patient suffering with auricular fibrillation presents himself, whether accompanied by signs of circulatory failure or not, immediate rest should be ordered and every opportunity should be given to the exhausted cardiac muscle to get proper rest and nourishment.

The next step is the selection of the proper medicinal agent,

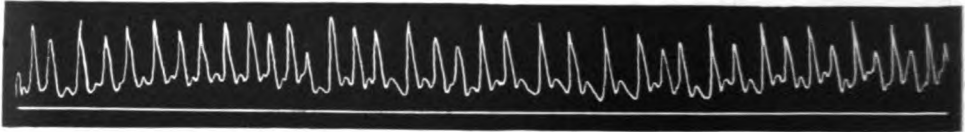


Fig. 5. Auricular fibrillation. Pulse rapid—160 per minute—and irregular in force and rhythm. Heart dilated. General anasarca present.

and for this condition we have a therapeutic agent whose action, in suitable cases, is little short of miraculous. In fact, the investigations that led up to the discovery of the value and of the proper indications for digitalis in auricular fibrillation, are among the most important in modern medical therapy. When given to suitable cases in proper dosage, digitalis slows the rate of the heart, establishes the normal rhythm and will rapidly restore to comparative health a patient who has been almost in the grave. So prompt and efficient is the action



Fig. 6. Same case three weeks later—after administration of digitalis—pulse rate 90 per minute and regular.

of this drug that all other remedial agents have a secondary place, as it has been found experimentally that when digitalis fails, nothing else is likely to be of any avail. (See Figs. 5 and 6.)

The reason for the remarkable therapeutic effect of digitalis in auricular fibrillation, lies in the power of this drug to depress the conductivity of the heart muscle and, in this way, the abnormal stimuli arising in the wall of the auricle are cut off

and the normal rhythm of the heart establishes itself through the medium of the auriculo-ventricular bundle.

As to the method of administration of digitalis, personally, I prefer to use the powdered leaves as they represent the full therapeutic property of the crude plant. It is my custom to give from three to six one grain capsules daily until the rate of the heart is reduced to between seventy and eighty beats per minute. A good tincture may also be used with advantage in doses of fifteen drops three or four times a day. Where the condition is marked and urgent relief is necessary, as much as two drachms of the tincture daily may have to be given. In very serious cases the intravenous injection of 1-250 of a grain of strophanthin may be occasionally employed for immediate effect, followed by digitalis. After the serious symptoms have been controlled, the dose of digitalis should be reduced, *only sufficient of the drug being given to maintain the normal rate and rhythm of the heart.* After a varying period of from one to ten weeks the drug may be discontinued and, if the auricular fibrillation is of a temporary character, the further use of the remedy may not be necessary. In other instances, especially in senile hearts, the continuous use of the drug may be necessary in order to prevent the onset of cardiac failure. In fact the drug may be given in moderate doses for years and in this way maintain the patient in comparative health and comfort.

It can be readily understood that the depression of conductivity of the heart by digitalis may be carried to excess and it is necessary to sound a warning against the reckless use of this drug. Cases of sudden death have undoubtedly occurred as the result of the administration of digitalis. As far as I have been able to observe, *such fatalities are the result of continuing the large doses, notwithstanding the fact that the rate of the pulse had been slowed to seventy per minute.* It is important to keep close observation on all patients who are receiving large doses of this drug and to reduce the dose as soon as the pulse has been reduced to normal limits and, where possible, tracings should be made of the radial pulse at frequent intervals in order that the characteristic coupled beats that occur as a result of the over-action of digitalis may be early recognized and the drug temporarily discontinued.

HEART BLOCK : PARTIAL AND COMPLETE.

The forms of irregularities previously described are all de-

pendent upon the result of stimuli arising in some abnormal manner. *In heart block, the disturbed action of the heart is due to the stimulus from the pace-maker failing to reach the ventricles.* In other words, to failure of conductivity through the Bundle of His. This failure may be partial or complete.

In complete heart block, the stimuli from the auricles are entirely cut off and the ventricles assume a rate of their own which is usually much slower than the normal pulse rate, falling to forty, twenty, or even ten beats per minute. On palpating the radial pulse, we are at once struck with the decided slowing in the rate of the pulse and, on placing the stethoscope over the heart, we note the absence of the ventricular sounds at the apex during the intermissions of the pulse. If a graphic tracing is made of the radial and jugular vessels, we can demonstrate that the auricular contractions are much more frequent than the ventricular.

The symptoms presented by patients with complete heart block are usually quite characteristic. In addition to the slow pulse, they have attacks of cerebral anaemia, resulting in syncope. These are especially likely to occur when the radial pulse rate is less than thirty per minute.

Coincident with these attacks we usually have evidence of circulatory failure such as shortness of breath and perhaps swelling of the extremities.

Complete heart block is always a serious condition, indicating as it does decided alterations in the cardiac muscle. These patients usually succumb sooner or later during one of the attacks of syncope.

Partial heart block, while readily diagnosed by means of polygraphic tracings of the radial and jugular vessels, sometimes escapes detection by ordinary methods of examination. The condition should be strongly suspected when, with the palpating finger on the radial artery, we note pulse intermissions with coincident absence of the ventricular sounds at the apex. The condition is most likely to be mistaken for an extra systole, in which condition, however, we should be able to hear the ventricular sounds although the pulse wave may not be felt in the radial artery. The symptoms presented by patients with partial heart block are often very few, especially if the rate of the pulse is forty or over. Under exertion, however, we find that the field of cardiac response is distinctly limited. Shortness of breath and vertigo are not uncommon. The prognosis

in such cases depends upon the general state of the heart muscle. If our tests show this to be good, the patient may live five, ten or even twenty years without discomfort.

Treatment: In treating a case of heart block, it is important to determine the cause if possible. Cases of syphilitic origin usually yield to antisyphilitic treatment and good results may be expected. If the condition is dependent on a degenerative disease as is frequently the case, our therapeutic results are not so brilliant. Iodide of arsenic, chloride of gold and iodide of mercury are the most generally useful remedies.

THERAPEUTIC USES OF THERAPEUTIC LAMPS.

BY

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THERE are various kinds of therapeutic lamps now on the market. Some are good and some worthless, hence a physician must use judgment when purchasing a lamp or he will be disappointed. There are more different kinds of therapeutic lamps on the market than any other kind of therapeutic apparatus now made. I have described a few of the different lamps in my article on "Cancers and Therapeutic Lamps," April, 1912, *Journal of Therapeutics and Dietetics*, and on account of space cannot repeat it here. The great majority of physicians have but little knowledge of therapeutic lamps, and as a proof of this assertion I will refer the reader to my article, "An Inquiry as to the Curative Value of Therapeutic Lamps," Nov. 1910, *Kansas City Medical Record*. This article contains the answers to questions I asked concerning therapeutic lamps from forty physicians in various parts of the United States. If the therapeutic lamp had no other influence except its pain-relieving effect it would still be a valuable apparatus in practice, especially office practice. Dr. J. H. Kellogg says: "The thermic rays of the arc light are among the most powerful means of pain inhibition yet discovered." Such a statement from such a noted man in such an important and common condition certainly deserves more than passing notice. Pain causes more people to consult a physician than all other things combined. Another writer in speaking of the lamp says it will relieve pain as promptly as a hypodermic injection of morphine without

the bad after effect of the narcotic unless the pain is the result of a direct dislocation. In the May, 1912, *Nebraska Medical Outlook* I have an article, "Photo Therapy vs. Vibratory Therapy as a Pain Reliever." In this article I quote letters from different physicians as to which is the better general pain reliever, the lamp or the vibrator, ten preferred the lamp and four the vibrator. The liver has five lobes, five fissures and five functions. Even the average layman knows the importance of the functions of the liver. Kellogg says: "There is probably no way in which the liver can be more profoundly influenced therapeutically than by the proper application of the arc light." If Kellogg is right regarding the effect of the therapeutic lamp on the liver this effect alone would make the lamp of great value, as in the majority of conditions in Southern States the liver must receive attention. By the proper use of the therapeutic lamp much surgery that is being done at present could be avoided.

I have discussed this in my article on "The Use of the Therapeutic Lamp in Surgical Cases," July, 1913, *HAHNEMANNIAN MONTHLY*. It is claimed by some that the therapeutic lamp will take the place of the local hot air apparatus for hot air treatment and that the electric light bath will take the place of the body hot air outfit, while some dispute this and claim each has its particular use. Kellogg says: "This application of the arc light is one of the best means yet discovered for relieving the pains of lumbago." The therapeutic lamp is of value in collapse under anesthesia, opium poisoning and cases of heart failure due to other causes. The therapeutic lamp is of much value in diseases of women and for girls that are developing into womanhood. C. F. Otis, M. D., says: "The light applied to the abdomen and spine one to three times per week will do much for ailments peculiar to puberty and different menstrual irregularities." He also says: "All enlarged conditions of the uterus, whether of the body of the organ or the cervix, will yield more rapidly to light than to any other method I have used."

The therapeutic lamp is of value in phlegmasia alba dolens (milk leg), uterine ulceration, ovarian enlargement, ovarian neuralgia and inflammation of the ovaries. By the use of the therapeutic lamp many ovariectomies could be prevented. There are many thousand women in the United States that have had their ovaries removed, some, of course, unnecessarily and

many others which could have been saved by the proper use of the lamp.

Dr. J. J. Brettner says: "In a case of dysmenorrhœa three treatments previous to menstrual period afforded relief which no local or internal treatment ever before afforded." The therapeutic lamp is of value in chronic metritis, salpingitis, dysmenorrhœa and amenorrhœa as well as many other diseases of women.

It is also of value to develop the breasts when poorly developed, especially in connection with other proper treatment. Women who do not like surgery should learn of the uses of the lamp. The therapeutic lamp is of value in consumption and bronchitis. In giving the treatment of chronic bronchitis Kellogg says: "The application of the arc light to the back and the chest is a most effective means of relieving cough and expectoration." I will mention a few other conditions where the lamp has proved to be of value, as follows: joint tuberculosis, intercostal neuralgia, pulmonary congestion, chronic inflammation of the gall bladder, chronic enteritis, chronic appendicitis, neurasthenia, gastralgia, gastric catarrh, Bright's disease, psoriasis, chronic myelitis, neuritis, gastric ulcer, rheumatism, pleurodynia, chronic deodinitis and cholangitis, visceral neuralgia, herpes zoster, furunculosis, magrine, locomotor ataxia, arteriosclerosis, acne, jaundice, inflammation of the bladder, neuralgia of the bladder, ulcers, old sores, gastric catarrh, chronic dyspepsia, spinal cirrhosis, synovitis, sciatica, abdominal dropsy due to cirrhosis of the liver, gastric and hepatic pain, sprains and various other diseases too numerous to mention.

This article applies to the arc therapeutic lamp exclusively. For information on the incandescent variety see my article on "The Incandescent Therapeutic Lamp," Oct., 1913, *Medical Century*. Almost every statement in this article is based on "Light Therapeutics," by Dr. J. H. Kellogg, and other literature published by the Good Health Publishing Company, of Battle Creek, Mich., so I do not fear an attack by some 2 x 4 authority. Further information can be found in my articles, as follows: "Therapeutics of Light and Color," Feb., 1906, *Medical Arena*; "Light and Color Therapy," Sept., 1906, *Wisconsin Medical Recorder*; "Notes Regarding Therapeutic Lamps," Jan., 1911, *Journal of Sanative Medicine*, and "Uses of Therapeutic Lamps," June, 1913, *Oklahoma Medical News-Journal*.

CARDIO-SCLEROSIS.

BY

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SCLEROSIS is by far the most frequent degeneration of the myocardium, as well as of the blood vessels. Most patients who at or after middle age begin to show evidence of relative heart weakness are victims of cardio-sclerosis. This alteration in cardiac structure may or may not be due to myocarditis. In the heart muscle, as elsewhere, connective tissue hyperplasia is produced by one or more of the following processes: (1) A mild and prolonged irritant setting up an interstitial inflammation; (2) venous hyperaemia; (3) atrophy of the parenchyma. Based on this pathology, with its etiological relations, Huchard's classification of cardio-sclerosis into four forms will be found both terse and comprehensive. These forms, somewhat modified, are:

- (1) Sclerosis of Heart Failure.
- (2) Senile Sclerosis.
- (3) Diffuse Sclerosis.
- (4) Nodular Sclerosis.

Sclerosis of Heart Failure.—This sclerosis is somewhat diffuse and most marked in the neighborhood of the valves and in the auricles. It is the result of venous congestion from slowly failing cardiac compensation usually attending valvular disease.¹

Senile Sclerosis was first described in 1887,² and Dehio, of Dorpat, who more fully investigated this form of sclerosis, maintains that although often found in combination with the nodular variety, it is a distinct pathological entity. It arises in a dilated and hypertrophied heart chamber, especially in the auricles, increasing proportionately with the hypertrophy of the myocardium, and, as this undergoes degeneration and atrophy, connective tissue proliferation is further stimulated to the end of supplanting the muscle fibres.

Diffuse Sclerosis is due to a general interstitial inflammation of the myocardium, the result of some infectious disease, as diphtheria, tuberculosis, typhoid fever, pneumonia, etc. It is

1. Orth. Zur Aetiologie der Herzschielenbildung, 1893.

2. Demange. Das Greisenalter, 1887. Cited by Prof. K. Dehio in Deutsche Medizinische Wochenschrift, November 22, 1900.

usually associated, especially in its early stages, with fatty degeneration. The atrophy of the heart muscle leads to dilatation, and, later, compensatory hypertrophy usually sets in. The history of the case, with evidence of chronic cardiac weakness and dilatation, assists in the recognition of these cases.

Nodular Sclerosis.—This is the most common form and is characterized by nodes of fibrous tissue in the myocardium, due to focal infections or infarcts from coronary sclerosis and thrombosis. Syphilis is a frequent cause of this form of sclerosis, and muscular rheumatism often invades the myocardium with circumscribed infiltrations. The majority of cases are intimately associated with arterio-sclerosis, the degeneration spreading to the coronary arteries, there producing infarcts. The effects of nodular sclerosis depend mainly upon the locality involved and the extent of the lesion. While in the wall of the left ventricle a lesion of this kind may exist without clinical evidence, an encroachment upon the auriculo-ventricular bundle will lead to serious interference with the action of the heart.

The clinical diagnosis of cardio-sclerosis is presumptive rather than positive. Excepting the effects produced by lesions of the auriculo-ventricular bundle, the symptoms are such as are common to all forms of myocardial weakness, especially when attended by hypertrophy and dilatation. For practical purposes, all chronic cases of heart disease, with gradually failing compensation or sudden death, may be classed as cardio-sclerosis, for the great majority of such cases present some form of connective tissue hyperplasia, more or less directly related to the cardiac weakness, and cases of simple atony and dilatation manifest a symptomatology and course differing in no essential point from cases of sclerosis. All varieties of chronic myocarditis essentially are an interstitial hyperplasia or lead thereto, and chronic fatty degeneration is likewise always attended by a connective tissue growth. Only one other degeneration is frequent enough to need mentioning—the segmentary disassociation of Renant * and Landouzy,³ a disintegration of the cement substance of the cardiac muscle fibres—but this has been held by later investigators to be, in all probability, only a post-mortem change.

*Although priority of describing this condition is generally attributed to Renant, in 1877, Dr. Hjalmar Helberg, of Norway, gave a detailed account of it four years earlier. *Norsk Magazin for Lægevidenskaben*, 1897, p. 1033.

3. Landouzy. *Note sur une nouvelle maladie organique de cœur*, 1877. Cited by Stevens in "The Pathology of Fibroid Degeneration of the Heart." *Journal of Pathology and Bacteriology*, Edinburgh, Vol. 11, 1894.

The symptomatology of each form of cardio-sclerosis is so varied and indefinite that for our present purposes it seems best to include all forms in one.

The myocardium may be involved to a considerable extent without producing symptoms. So long as there is compensation by hypertrophy for any local or general damage present, and so long as the auriculo-ventricular bundle remains intact, the patient experiences no discomfort or inconvenience. But when from impaired integrity of the myocardium the reserve force is diminished, an additional demand upon the heart power will show its insufficiency. The first indication the patient has of something being wrong is usually a sense of oppression in the chest, with dyspnoea, upon exertion which formerly caused no trouble. This is generally of gradual development, but may be suddenly manifested after physical strain. In advanced cases, ordinary walking or passing from a warm room into a cold atmosphere will induce breathlessness. Paroxysms of dyspnoea are usually brought on by exercise or pain, but sometimes they are delayed several hours, and nocturnal attacks are not uncommon. In the terminal stage of cardio-sclerosis the breathing often assumes the Cheyne-Stokes type, which is almost always associated with high arterial tension and subsides with the fall of blood-pressure before the heart failure is complete.

A symptom of cardio-sclerosis almost as common as dyspnoea is pain. These cardiac pains may be so slight as to amount only to a sense of tightness across the chest; quite often, however, they give rise to considerable distress, whilst attacks of angina pectoris are almost pathognomonic of cardio-sclerosis.

To determine the amount of the reserve force of the myocardium various methods have been advocated. Some of these are based upon changes in the pulse rate, others upon fluctuations of blood-pressure, brought on by changed postures or exercise. Looking over my records of such private patients as have been examined in both the lying and standing postures, I have found that while in the aggregate a rise of pulse rate of about 14 beats occurs in non-cardiac patients upon assuming the standing posture after lying, cardio-sclerotic cases showed an average increase of but 9 beats. But upon closer investigation this lessened increase in pulse rate was seen to be due to high blood-pressure rather than to any structural changes in the myocardium, inasmuch as the cases of cardio-sclerosis with

low blood-pressure did not show, in this respect, any material difference from the non-cardiac cases, unless, indeed, it be in the direction of further augmented pulse rate. Besides, the pulse of the individual patient varies so much from psychic causes during a physical examination that great care is necessary before a certain increase can be attributed to the change of posture alone. The same may be said in regard to blood-pressure, which, so far as my experience goes, does not, after change of posture, show any alteration peculiar to cardio-sclerosis. Taking the blood-pressure after the patient has performed a certain amount of muscular work, and noting the extent and duration of its rise and fall following the exertion, is a test that still has many advocates. Gräupner⁴ states that mild rapid exercise causes a rise of blood-pressure in normal individuals, which outlasts the period of acceleration of the pulse, while in patients with weak hearts the blood-pressure falls before the pulse has reached the usual rate. A. D. Hirschfelder has also found that when the heart is subjected to strain—the weak heart as well as the strong—there is a rise in blood-pressure which lasts for a while in both cases, even when actual dilatation exists. It was observed, however, that in many cases of dilatation the period during which the blood pressure remained high, was much more prolonged. The patient with a moderately weak but not absolutely failing heart usually responds with much greater rise of blood-pressure than does the normal individual; while, on the other hand, the athlete responds to mild exercise with a fall of pressure. Such tests are, therefore, of but limited value, and, besides, the continued observations of blood-pressure required during a single *séance* are too time-consuming for routine work. The old-time method of directing the patient through a certain amount of exercise and watching its effect, noting particularly his sensations and general appearance, his manner of breathing, the change in color, the degree of fatigue, and the duration of an increased pulse rate after his return to rest, still remains our best index to myocardial competency.

In no other affection will the same extremes of pulse-rate and rhythm be found as in arterio-sclerosis. This is due to a variety of disorders to which the auriculo-ventricular bundle (or bundle of His) is liable. This bundle consists of a cord of peculiar muscular tissue, beginning in the walls of the right au-

4. Journ. Am. Med. Assn. April 15, 1911. Editorial.

ricle as individual fibres converging to form a cord which passes through the auriculo-ventricular septum into the right ventricle, to be finally broken up into fine threads and distributed to the apices of the left and right ventricles. In connection with the bundle is a node—the sino-auricular node—at the mouth of the superior vena cava, and another node—the auriculo-ventricular—at the mouth of the coronary sinus. The function of the bundle is to convey the contractive impulses from the auricle to the ventricles.

Normally the impulse originates in the sino-auricular node and travels downward. The entire bundle is, however, super-sensitive to stimulation, and an abnormal irritant at any point of its continuity may excite a stimulus which may travel in both directions simultaneously. In this way, premature and feeble contractions, extra-systoles, may occur, or the auricles and ventricles may contract simultaneously (nodal contraction) in response to the stimulus. Such a premature contraction may occur after every normal beat, after every second, or later; and since the premature feeble pulse beat is scarcely perceptible to the finger palpating the radial artery, the impression of an intermittent pulse is made. Though usually caused by a damaged myocardium, certain abnormal nerve influences, as f. ex. irritation of a well-defined area of the mucous membrane of the nose, may give rise to similar extra-systoles by reflex action. A pulse of marked rapidity (160-200) and irregularity is sometimes found in sclerosis of the auricles, and often occurs in paroxysms. The electrocardiograph has demonstrated that in these cases the muscular fibres of the auricles, instead of contracting harmoniously, are acting in groups producing a state of rapid, irregular flutter, thus preventing the propelling action of the auricle. The ventricles are thereby bombarded over the auriculo-ventricular cord with innumerable feeble impulses and thrown into extreme irregularity of action. This condition is known as auricular fibrillation. More rarely the ventricles will also partake in the fibrillation. An infarct or inflammatory node may impair or destroy the conductive power of the auriculo-ventricular bundle, usually at the auriculo-ventricular septum, thus at first delaying, then barring more or less completely the impulses from reaching the ventricles. This results in an intermission of the ventricular action—usually every second or every third beat missing (partial heart block)—increasing with the progress of the lesion until com-

plete arrest of all the impulses occurs. As soon as complete heart block has thus developed, there is a sudden suspension of all ventricular action, or greatly delayed action, with the production through anemia of the brain of the Stokes-Adams syndrome: syncope, often marked by unconsciousness; a very slow pulse, sometimes as low as five beats per minute; and more rarely convulsions. Sudden death at this time is not uncommon; in other cases, the ventricles, now deprived of the auricular impulses, adjust themselves to the new conditions and generate their own impulses at the rate of 25 to 35 per minute. All of these irregularities of cardiac rhythm may be produced by crude doses of certain heart stimulants belonging to the digitalis group, and sometimes by reflex irritation. The isolated symptom of intermittent or irregular pulse is, therefore, of but little diagnostic value, but when it remains unimproved by one or two hypodermatic doses of 1-100 gr, atropine, and is associated with other symptoms of cardio-sclerosis, it becomes predominantly significant of an organic lesion.

A continued high blood-pressure usually means sclerosed arteries, and arterio-sclerosis is the usual precursor of sclerosis of the heart, which, anatomically considered, is but an hypertrophied blood-vessel. Enlarged, thickened radials and tortuous temporals are equally suggestive. It is true that high blood-pressure is as constant in interstitial nephritis, but this form of nephritis and arterio-sclerosis are so intimately related that in each instance cardio-sclerosis is but a natural extension of the disease.

Among other physical signs of cardio-sclerosis are aortic murmurs, especially a short diastolic puff; cardiac hypertrophy with short systolic mitral murmur and an increased pulse-pressure; and later, when compensation fails, the usual signs of gradual heart failure: a loss of muscular tone in the systolic sound; a reduction in intensity of heart murmur and a lessening of the vigor of the apex beat; an increasing pulse rate with a lowering of pulse pressure; enlargement of the liver; pulmonary oedema and general dropsy.

Concerning the course of cases of myocardial degeneration Huchard makes this succinct statement: "Their evolution is latent, their beginnings insidious, their course paroxysmal, their progress interrupted, their visceral complications various, and their explosions of cardiac insufficiency are sudden." The marked advance that has lately been made in the diagnosis of

cardio-sclerosis through graphic methods of examination, has made it possible to anticipate certain accidents formerly obscure, such as the Stokes-Adams syncope, and has enabled us better to understand the so-called cumulative action of heart stimulants, but until we are able more accurately to determine the amount of myocardial reserve power and the conditions inducing auricular and ventricular fibrillation than we now do, the course and duration of any case of cardio-sclerosis will remain incalculable.

ILLUSTRATIONS.

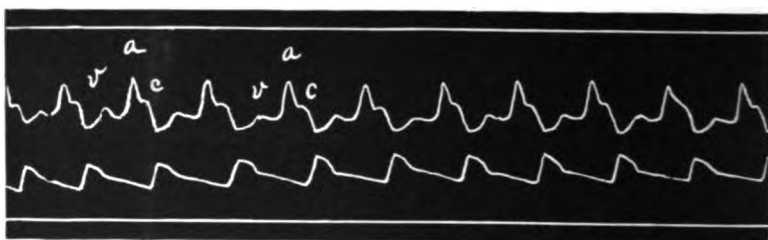


FIG. 1.—Normal jugular and radial tracings. a—auricular wave in jugular vein, produced by the accumulation of blood in the vein during contraction of the right auricle. c—Carotid wave, produced by distension of the carotid artery during contraction of left ventricle. v—Ventricular wave, due to obstruction of the flow in the jugular vein offered by the closed tricuspid valve during systole of right ventricle. Note the short distance between the auricular and carotid waves, the so-called a—c interval.

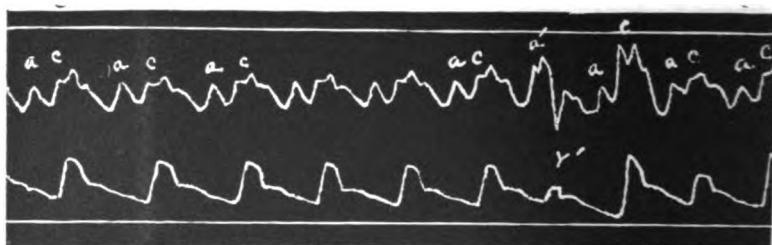


FIG. 2.—Increased a—c interval (threatened heart block) and extra-systole. (From a case of myocarditis, with subsequent death due to Stokes-Adams syncope.) Note the relatively longer a—c interval, which lengthening is caused by obstruction to the impulse of contraction traveling from the au-

ricle to the ventricles, and resulting in a delayed ventricular systole—the first step toward heart block. At r' , a premature contraction of the ventricles, from an abnormal impulse, is observed (ventricular extra-systole); and coincides with the normal contraction of the auricles, so that regurgitation into the vein is shown at a' .

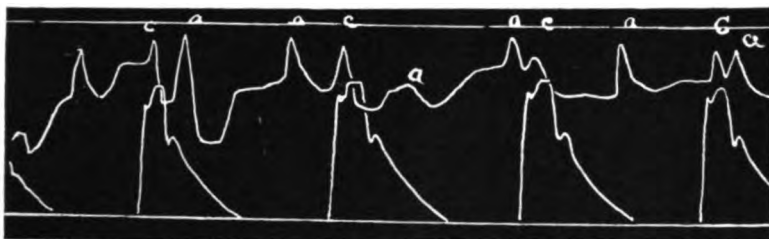


FIG. 3.—Complete heart block. Pulse 34. Rhythm 8 to 5. as indicated by the relative frequency of the auricular and carotid waves.



FIG. 4.—Pulsus Alternans. The pulse beats (radial) are seen to alternate in size, but each begins in its normal location. Caused by myocardial exhaustion.

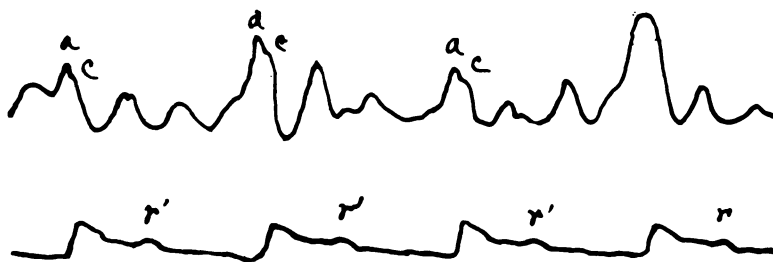


FIG. 5.—Extra-Systoles. These are small pulse beats at r' occurring *prematurely*, being located in front of their normal position.

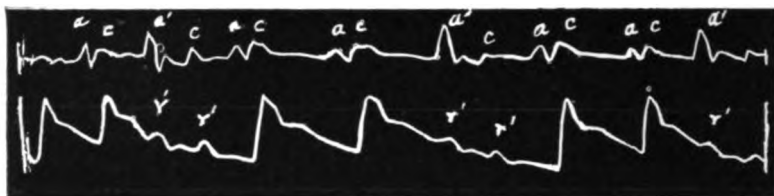


FIG. 6.—Double Extra-Systole. The first extra-systoles are evidently caused by a premature impulse starting in the auriculo-ventricular node, causing the auricles and ventricles to contract simultaneously, as recognized by the regurgitation into the jugular vein at the time of the normal auricular contraction.

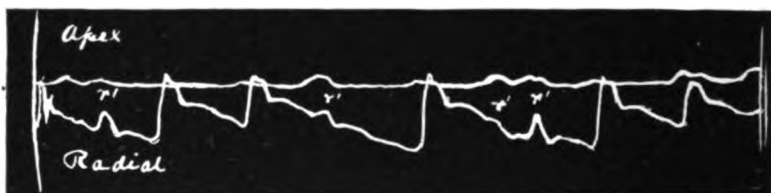


FIG. 7.—Same showing apex beat above, instead of the jugular tracing. The action of the apex is seen to correspond to both extra-systoles.



FIG. 8.—Auricular Extra-Systole. In this tracing the premature c wave is preceded by an a wave, which is also premature. Evidently the impulse started prematurely in the auricle.

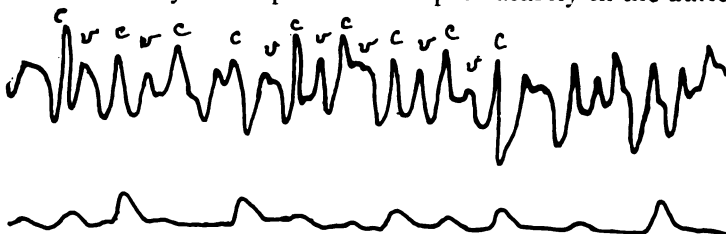


FIG. 9.—Auricular Fibrillation. Note the absence of the auricular wave in the jugular (upper) tracing; also the very irregular and rapid radial pulse (lower tracing). Four hours later the heart action became perfectly normal.

REPORT OF TWENTY-EIGHT CESAREAN SECTIONS WITHOUT A DEATH.

BY

FLORENCE N. WARD, M. D.

(Read before the meeting of the American Institute of Homœopathy, June, 1914.)

IN discussing Cesarean Section, particularly its practical aspects, the most profitable conclusions may be drawn from an analysis of a group of cases. This will be my motive in presenting a series of 28 cases that I have operated. The number is sufficiently large to permit certain deductions, of value in either verifying results obtained by others, or in modifying existing interpretations.

Cesarean section now occupies a distinctive position in surgery, its sphere has steadily enlarged during the last few years, displacing the old mutilating operations upon the child to save the mother, and becoming practically the single procedure in obstructive dystocia, be the obstruction due to the passenger or to the passage. It has invaded and supplanted high forceps operations, symphysiotomy, pubiotomy, craniotomy upon the living child, and it is the accepted procedure for placenta previa.

The obstetrician owes much to the surgeon for this essential development. With the advances in abdominal surgery, the mortality of coeliotomy, in simple and clean cases, is reduced to less than 1%; celio-hysterotomy or Cesarean Section takes its place among this group of operations.

As for the operation itself, the technique has become so perfected that little is left to be desired. It is the pre-operative period that needs more attention, not only in the wise selection of cases, but also in the choice of time for operating. These considerations will determine, many times, the successful outcome for mother and child. Upon the general practitioner must devolve many of the decisions, and also the care of the patient before operation is undertaken. Any mistakes at this time may be enough to nullify the otherwise perfect results of the operation, and it is to this point that particular attention will be devoted.

Mortality.—In analyzing my series of cases, the mortality rate for the mothers was nil, of 28 operated, 28 recovered. Of the infants, 6 were non-viable, these being cases in which the

mother's condition was so desperate that the operation was done solely in her interest; but of the full term babies all, or 23, lived; one patient having twins.

Age.—Of the 28 patients, 18 were primipara and 10 multipara, 5 of whom were para and required Cesarean Section because of damage inflicted by the first labor. The oldest patient was 45, the youngest 16½ years. In decades, three were in their forties, 11 in the thirties, 13 in the twenties, 1 under 20.

Indications.—The indications varied greatly, embracing the accidental, the mechanical or obstructive, and the constitutional forms of dystocia.

I. *Accidental.*

Placenta previa	5
Fracture of both femora	1

II. *Mechanical or Obstructive.*

Foetal

Attitude faulty.

Brow presentation, which rotated posteriorly.	1
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Position faulty.

Occiput-posterior (1 in flat pelvis, 1 with cicatricial tissue in vaginal vault)	5
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Maternal.

Uterine fibroids (1 complicated by albuminuria)	2
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Cervical rigidity due to cicatricial tissue in cervix and vault of vagina (2 in flat pelvis and 1 an occipito-posterior)	5
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Pelvic deformities.

Justo-minor (complicated by eclampsia)	1
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Simple flat (2 with cicatricial tissue and 1 an occipito-posterior)	3
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Luxation of both femora with justo-minor pelvis	1
---	---

III. *Constitutional.*

Cardiac, chronic endocarditis	1
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Renal, eclampsia and albuminuria	4
--	---

Toxemias,

Pernicious vomiting	2
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Of the 28 cases, 10 were elective, the rest were permitted the test of labor, or the operation was undertaken as the result of complication of labor.

I. *Accidental.*

Of the accidental conditions, placenta praevia necessitated the operation 5 times.

The case in which there were fractures of both femora presented many interesting features. During the first days of her pregnancy she was out riding with her husband, when the horses became frightened and ran away. Her husband was killed and she sustained a fracture of both femora. She was taken to a hospital in the country, the fractures apparently reduced and she was immobilized on her back. Her surgeons were unable to secure union, notwithstanding repeated anaesthetics and resettings. Pregnancy was not expected, failure to menstruate was attributed to shock, and it was not until enlargement of the abdomen and foetal movements became manifest that a diagnosis of pregnancy was made. She was brought to the city still immobilized in bed on the seventh month of her pregnancy. X-ray showed angulation and non-union of both femora. Dr. Hunkin then operated upon the left femur, plating the fractured ends, and in six weeks, plated the right femur. The patient was immobilized in a cast from mid-chest to her toes. As the expected time of delivery drew near, the abdominal portion of the cast was cut away preparatory to an abdominal cesarean, which was performed at the first symptom of labor. The position of the child was L. O. P. The result was a living child and good recovery of mother, both as regards her confinement and later ability to walk.

II. *Mechanical or Obstructive.*

Of the mechanical conditions due to foetal abnormalities, there were 5 cases of occiput posterior position. In each, labor progressed 24 hours or more with but slight dilation and non-engagement of the head. The inability of the patients to deliver themselves was evident and a Cesarean Section was considered the quickest and safest procedure. I am very much inclined to Warren's opinion that a backward displacement of the occiput means usually a narrow conjugate and is the result, not the cause, of the obstruction.

There was one case of brow presentation. The head, which was larger in all its measurements than normal and could not be made to engage in the superior strait, notwithstanding good uterine contractions for 36 hours. It was clearly a case of disproportion of the head for that special pelvis and necessitated interference for the delivery.

Maternal obstruction conditions were the cause of dystocia

in 8 cases, one being fibroids in a woman of 44 years in whom there was the complication of albuminuria and twin pregnancy.

There were 5 cases of cicatricial contractions in the vaginal vault, following severe labors with instrumental deliveries; all of these were referred to me by their physicians, the cicatricial masses were so extensive that the physicians were not willing to undertake their care by the ordinary methods. These were all elective operations, Cesarean being performed when the first premonitory symptoms of labor appeared, or at the expected time of labor.

Flat pelvis occurred in 2 cases, one an undeveloped girl of 16, in whom eclampsia occurred; the child was oversized, weighing 9 lbs. 1 oz. There was one case of deformed pelvis from congenital dislocation of both femora.

There was one case of large uterine fibroids blocking the pelvic canal. In the 4th month of her pregnancy a coeliotomy was performed by a local surgeon in an effort to remove the fibroids. On opening the abdomen it was found inadvisable to do a myomectomy, and the abdomen was closed, permitting the pregnancy to progress to full term. At full term I delivered the child by Cesarean Section, and then performed a Porro.

III. *Constitutional.*

In the constitutional conditions the toxemias played a large part, numbering 8; 2 patients being in coma and eclamptic, and one of oedema of so severe a type that the vulva was impassable by reason of the enormous swelling of the external genitals.

The cases giving the greatest anxiety were those of albuminuria, in which the symptoms of toxæmia increased steadily under the stress of labor, and which were accompanied by a rigid, unyielding cervix; the uterine contractions had apparently no effect in thinning or dilating it. In these ineffectual labors it was always deemed wise to empty the uterus by Cesarean before allowing the patient to pass into the danger zone.

There was one case of Cesarean Section for a chronic endocarditis, following acute rheumatism; every valve was involved, it was an extremely severe lesion. The patient consulted me during the early weeks of pregnancy as to the advisability of permitting it to continue. She had had a therapeutic abortion performed 6 years previously on account of

the cardiac lesion. In the present case Dr. Spaulding was called in consultation, the condition was carefully explained to the patient, the danger of terminating the pregnancy, and also the risks involved in its continuance. As she greatly desired the child, she concluded to continue the pregnancy, leaving the conduct of labor to our judgment. The patient was kept under observation during her pregnancy, carefully dieted, and remained in bed during the last few weeks. I made a very rapid Cesarean toward the end of the pregnancy, just before the expected time of labor. Dr. E. P. Glover administered the anaesthetic. Both mother and child made a good recovery.

The last interesting case of the group was a persistent and uncontrollable case of hematuria. The patient was edematous, the urine loaded with blood albumen and casts, her hæmoglobin was 54%, and red cell count 1,680,000. Every effort was made, by keeping the patient in bed, to carry the child to the period of viability, but unsuccessfully; the condition grew worse. After consultation with Dr. Kreutzman, Cesarean Section was performed at 6½ months.

General Indications.

Since Cesarean Section is now the accepted method of dealing with all forms of foetal and maternal dystocia, every abnormal case becomes a potentially surgical one, and in the last weeks of pregnancy should be so considered. As we all know the majority of women carry within themselves the normal mechanical conditions for a successful labor,—a normal sized foetus mechanically adjusted to a normal pelvis in a maternal mechanism capable of sustaining the metabolic processes within itself and its foetus through pregnancy and labor.

These cases give us no anxiety, particularly when they are multiparous and have proven by one or more preceding labors that they can bear its test. The abnormal cases form a group by themselves and should be carefully studied; and if the indications for a Cesarean are absolute, the operation should be an elective one at or near the time of labor. If the case is one of the border line type, then the patient may be permitted to undergo the test of labor with the undersanding on the part of her physician, of the condition existing and his readiness to interfere with surgical measures, if at any point it is not safe to permit her to make further effort. This may be done with safety if the patient is kept surgically clean, the slightest infection in this stage means the possible failure of a Cesarean later. As

few examinations as possible should be made after labor begins, and then under the most rigid precautions.

In the hospital care of our parturient patients, every precaution is taken both in the preparation of the patient and ourselves, as much so as in the preparation for an abdominal section. The external genitals of the patient are shaved and scrubbed with green soap, followed by lysol, everything coming in contact with the patient coming from the sterilizer.

The obstetrician's hands are scrubbed and covered with rubber gloves. On making the examination, the labia minora are carefully separated by the left hand, so that the examining finger does not carry anything from without into the vagina. During labor the vulva is protected constantly by sterile pads. If these precautions are carefully observed, the patient comes to the Cesarean operation surgically clean, and unless some unforeseen or accidental condition arises during operation, the results for both mother and child are assured. I would sooner run the risk of several hours of labor in testing the patient's ability to cope with some abnormality than the danger of one careless or unclean examination.

We are all agreed with Reynolds that the patient's resistance is lowered by long-continued and ineffectual efforts at delivery, and in the last stages of exhaustion, she is illy fitted to meet the exigencies of an abdominal section. It is good obstetrical judgment that makes the decision before her resistance is lowered; all the time her physician, while reaching this conclusion, is keeping her surgically clean, the one predominant thought being the maintenance of rigid asepsis, as few vaginal examinations as possible and no experimental manipulations if the possibility of Cesarean is contemplated.

Technique.

The details of the operation I have reduced to the simplest possible technique, rejecting every superfluous detail. The abdomen is painted with iodine 5%, after the patient has had the preliminary hypodermic of one-quarter gr. morphine and 1-125 gr. atropin. The anæsthetic used is ether, drop method. the only abdominal operation in which I do not use nitrous oxide and oxygen. It seems that ether is safer, giving more complete abdominal relaxation than nitrous oxide. My anæsthetist, Dr. E. P. Glover, has the patients under such physic control that they are usually ready for me in 4 minutes from the commencement of the anæsthetic.

The incision I make to the right of the umbilicus, about 3-4 above and 1-4 below, remembering that the abdominal wall is much thinner above the umbilicus than below it, and two or three strokes of the scalpel carries the incision through the peritoneum directly upon the uterus. I inspect the uterus and seek the median line, for the reason that there is so often a dextra-torsion. The uterine incision is made as high as possible in the fundus. If the placenta is encountered, it is either cut through or swept aside, the membranes are ruptured and with a gush of the liquor the child's presenting part is grasped, the child delivered, and placed in a sterile sheet held in readiness by an assistant on my left. One assistant is grasping the uterus with both hands through the abdominal wall, while my first assistant places a large moist gauze pad in the upper angle of the abdominal incision to hold back the intestines as the uterus contracts down. The cord is quickly clamped, placenta and membranes delivered, and the uterine cavity freed of any shreds.

The closure of the uterine incision is quickly begun. By this time the pressure of the assistant's hands, holding the uterus, has caused it to be delivered outside the abdomen, where it is surrounded by warm, moist saline gauze pads. I use a good sized curved Martin needle, large enough to penetrate the contracting wall down to the decidua with one sweep of the needle, and with linen thread making interrupted sutures, about $\frac{1}{2}$ inch apart. As soon as the uterine sutures are tied the bleeding stops, I then place a row of Lambert sutures of fine linen thread over the first interrupted row, uniting the peritoneum completely so as to leave no points for leakage or adhesive areas.

There has been no trouble from infection with the linen, and no reason why it should not be left in the uterus, just as it is in intestinal and stomach suturing. We have but to watch the contractions in a uterus which has just been emptied to realize the great force that is exerted by the contractions and the pull that must be upon the ligatures. The strain of a future pregnancy must also be considered, and for the patient's security, it is absolutely necessary that the uterine scar be of uniform integrity. Catgut sutures may absorb too soon, or may become untied, leaving a raw area for adhesions or a weak spot in the uterine wall. One post-operative Cesarean that I saw presented the unusual condition of the uterus fixed high up against the

abdominal wall; the operator had used catgut, which I think had given way at some point, permitting a uterine fixation. It was an unfortunate sequella, as it prevented later pregnancies which the patient was most desirous of having.

After the uterine closure is completed, the abdominal wall is closed with unusual care, so as to have an unimpaired wall. I leave no packing in the uterus, and carry none down into the cervix; there need be no anxiety about the cervix being patulous, or sufficiently open for good drainage. With the powerful contractions of the body of the uterus, the cervix will always be pulled well open. Neither do I find the necessity of hypodermic injections of ergot, the manipulations while suturing the uterus are sufficient to cause good uterine contractions. Greatest care is exercised to touch the abdominal contents as little as possible. After closing the uterus it is slipped back into the abdomen, the intestines being barely exposed to view; the omentum is placed on the fundus, covering the intestines.

The time element is an important consideration in the Cesarean operation. Without haste, but with every movement well directed, I can keep the time required for the operation well within the half-hour limit, allowing 4 minutes for the anæsthesia. My average time for delivery of babe is three minutes, 1½ minutes for delivery of placenta and membranes and freeing uterine cavity of shreds, 10 minutes for uterine closure, and 11 minutes for thorough layer closure of the abdominal wall.

DISCUSSION OF VARIOUS OPERATIONS.

As to the different Cesarean operations advocated, none I think are superior to the classical Cesarean. The vaginal Cesarean will in time go the way of vaginal hysterectomy; it involves more time for its execution, and it inflicts more trauma upon the mother in the effort to deliver the child through the pelvic outlet. The abdominal route is more direct, quicker and cleaner. In only one case of toxemia did I utilize the vaginal route.

The claims for the extra peritoneal supra-symphyseal Cesarean Section are now before the profession. In a masterly review of the extra peritoneal and transperitoneal methods by Nicholson, in "Surgery, Gynæcology and Obstetrics,"* he

*February, 1914, page 244.

elaborates the technique of Frank, Sellheim, Veit, Dorderlein and others, discussing at least 20 operations that have evolved by this method.

The indications as claimed by the advocates of this method are for the neglected, mildly infected cases. I can not see wherein are the advantages over the classic Cesarean, for the reason that the technique is much more complicated and prolonged, more trauma is inflicted, and large areas of cellular tissues opened up for fresh infection, all of which diminish the patient's resistance if already lowered by infection.

POST-OPERATIVE COURSE.

The lying in period is as a rule as uneventful as the normal case, with much less discomfort about the vulva than in delivery through the natural passages. Some of the patients have not known that there has been an abdominal incision until the time comes to remove the sutures. The health of the patients following the operation has invariably been good, there have been no retroversions, or sagging of pelvic contents, nor weak pelvic floor such as we sometimes encounter even with the best of care in our other cases.

Thus far, there have been only two patients who have been pregnant since their Cesareans; in one where the operation was performed for placenta previa, the second pregnancy pursued a normal course, and the patient delivered herself of a vigorous child without unusual difficulty. The other patient was brought to the sanatorium suffering from a violent hemorrhage 1½ years following her Cesarean for eclampsia. Examination showed a 6½ months pregnancy with placenta previa; a second Cesarean was promptly done to save her life, unfortunately it was too early for the child to be viable.

CONCLUSIONS.

1. The necessity for the careful study of suspected abnormal obstetrical cases and the recognition of grave obstetrical lesions before labor sets in.
2. If operative interference is indicated, then early operation, before the patient is exhausted by ineffectual labor.
3. In the pre-operative stage, if Cesarean is contemplated,

the avoidance of all intra-pelvic manipulations and the most scrupulous care that the patient be kept surgically clean.

SUMMARY OF CASES.

1. Mrs. R., age 44, 1 para, Dec. 12, 1904. Multiple uterine fibroids, with albuminuria and profound toxemia developing in 33rd. week of pregnancy. Abd. ces. sec. of twins. Eclamptic seizure followed operation. Both infants lived and mother made good recovery.

2. Mrs. B., age 36, 1 para, May 25, 1908. Placenta previa with profuse haemorrhage, full term. Abd. ces. sec., good recovery of mother and child.

3. Mrs. N., age 20, 1 para, congenital dislocation of both femora; undersized justo-minor pelvis. Elective abd. ces. sec., at full term. Living child. Mother made good recovery.

4. Mrs. P., age 27, 1 para, March 3, 1910, patient of Dr. Boldemann. Albuminuria with toxic eruption over entire body, edema of vulva so extensive as to render vaginal examination impossible. Abd. ces. sec., at full term, consultation with Dr. Spaulding. Living child, good recovery of mother.

5. Mrs. W., age 31, 2 para, April 28, 1910. patient of Dr. Cameron. Eclampsia, brought to sanatorium comatose with frequent convulsions. Urine by catheter showed 5% albumen, granular and hyaline casts. Abd. ces. sec., solely in the interest of mother; child moribund, mother recovered after stormy convalescence, the convulsions persisting for two days.

6. Mrs. L., age 35, 1 para, July 13, 1909, patient of Dr. Engle. Placenta previa, repeated profuse hemorrhages, consultation with Dr. Spaulding. Abd. ces. sec., living child. Good recovery of mother.

7. Mrs. S., age 24, 1 para, Nov. 18, 1908, patient of Dr. Engle. Albuminuria with eclampsia, patient brought in comatose state and in convulsions. Vaginal Cesarean Section at full term. Living child. Good recovery of mother.

8. Mrs. P., age 32, 3 para, March 19, 1910, patient of Dr. Goss. Extensive cicatricial tissue in vagina from lacerations of 2 previous severe instrumental deliveries, in which both infants died. Patient weighed 215 lbs. Elective abd. ces. sec., at full term. Living child. Recovery mother.

9. Mrs. W., age 33, 2 para, March 2, 1911. Previous pregnancy twins with instrumental delivery. Extreme vomiting

in early pregnancy became pernicious in 6th month, and patient went into collapse. Consultation Dr. Spaulding and Dr. H. Herrington. Abd. ces. sec. to save mother, the fœtus non-viable. Patient in extremis, saline solution with adrenalin administered intravenously during operation. Good recovery of mother.

10. Mrs. J., age 28, 1 para, Oct. 16, 1911. Albuminuria with rapidly increasing toxemia, rigid cervix dilating but 1 finger after 48 hours of labor. Patient rapidly becoming exhausted by ineffectual efforts. Abd. ces. sec., at full term, living child. Mother made good recovery.

11. Mrs. B., age 25, 1 para, Oct. 24, 1911. Placenta previa, profuse hemorrhage. Abd. ces. sec., living child. Good recovery of mother.

12. Mrs. V. G., age 35, 2 para, March 23, 1912, patient of Dr. Stambach. Instrumental delivery 14 months previously, after a 4 day labor, followed by severe infection. During last weeks of present pregnancy cervix protruded through vulva. Irregular pains for several days, with dyspnœa and evidence of cardiac strain. Abd. ces. sec., living child, recovery mother.

13. Mrs. M. A., age 16, 1 para, May 19, 1912. Undersized woman, justo-minor pelvis, rigid cervix, with ineffectual labor for 31 hours, eclampsia developed. Abd. ces. sec. Living child of 9 lbs. Recovery of mother.

14. Mrs. C., age 40, 2 para, May 29, 1912. First labor instrumental delivery with extensive cervical and vaginal lacerations and resulting cicatricial tissue. Flat pelvis. Abd. ces. sec. Living child and recovery of mother.

15. Mrs. R., age 38, 1 para, June 18, 1912. Chronic endocarditis of extreme degree involving every valve, following acute rheumatism. Patient in bed during last weeks of pregnancy. Elective abd. ces. sec. at full term. Living child. Good recovery of mother.

16. Mrs. B., age 45, 2 para, Nov. 6, 1912. First labor instrumental, giving still-born child. Lacerations of unusual extent with cicatricial contraction of vaginal vault. Flat pelvis. Abd. ces. sec. at term. Living child. Good recovery of mother.

17. Mrs. C., age 24, 1 para, April 3, 1913, patient of Dr. E. P. Glover. Occiput posterior position. Abd. ces. sec. after 24 hours of severe and ineffectual labor. Living child, good recovery of mother.

18. Mrs. J., age 28, 2 para, March 14, 1913. Placenta

previa in pregnancy at 6½ months with profuse hemorrhages; had abd. ces. sec. 17 months before for albuminuria. Abd. ces. sec. solely in interest of mother. At request of both husband and patient, Fallopian tubes severed close to uterus and distal and proximal ends embedded in folds of broad ligament. Good recovery of mother.

19. Mrs. S., age 35, 2 para, April 30, 1913. Stellate laceration of cervix followed instrumental delivery at previous pregnancy, leaving vault of vagina filled with cicatricial tissue. Position L. O. P. Abd. ces. sec. Living child and good recovery of mother.

20. Mrs. B., age 20, 2 para, May 1, 1913. Pernicious vomiting. Abd. ces. sec. at 6½ months solely in interest of mother, child non-viable. Recovery of mother.

21. Mrs. C., age 23, 1 para, July 15, 1913. Flat pelvis, subjected to 36 hour labor test, then abd. ces. sec. Living child and good recovery of mother.

22. Mrs. B., age 25, 1 para, Sept. 1, 1913. Occiput posterior position. Ineffectual labor of 48 hours. Abd. ces. sec. Child and mother recovery.

23. Mrs. I., age 25, 1 para, Oct. 2, 1913. Brow presentation, rotating posteriorly; ineffectual labor for 36 hours. Abd. ces. sec. Living child, good recovery of mother.

24. Mrs. A., age 38, 1 para, Jan. 29, 1914. Patient of Dr. Boldemauu. Multiple uterine fibroids, in which laparotomy was made in 4th month by Dr. W. I. Terry, attempted myomectomy, but deemed on inspection not advisable; pregnancy continued to full term, when Porro was performed. Living child and good recovery of mother.

25. Mrs. B., age 28, 1 para, Feb. 8, 1914. Accident in first month of pregnancy, fractured both femora. After repeated attempts by different surgeons to reduce the fractures, they were finally successfully operated by Dr. Hunkin, in the 7th month of the pregnancy. Patient was still in casts at expected time of labor, when abdominal portion of cast was removed and abd. ces. sec. performed. Living child, good recovery of mother.

26. Mrs. G., age 38, 3 para, March 18, 1914. Placenta previa, continual hemorrhages from the 6th month, growing more profuse. Abd. ces. sec. Child non-viable. Good recovery of mother.

27. Mrs. W., age 31, 1 para, April 16, 1914. Patient of Dr.

Engle. Occiput posterior, rigid cervix and ineffectual labor. Abd. ces. sec. Living child. Good recovery of mother.

28. Mrs. C., age 21, 1 para, April 25, 1914. Albuminuria with persistent hematuria and general edema. Hæmoglobin 54%, red cells 1,680,000. Abd. ces. sec. at 6½ months. Good recovery of mother.

DIELT'S CRISIS.

BY

DEWITT G. WILCOX, M. D., BOSTON, MASS.

(Read at the American Institute of Homoeopathy, Atlantic City, N. J.,
July 2-3, 1914.)

It requires one type of the detective instinct to recognize a disease which is ushered in by an insidious, prolonged, uneventful prologue; another type to recognize the more rapid and pronounced immediate forerunners; and still another type to recognize those diseases which are ushered in by grave crises and which may or may not subside after they have spent themselves.

In the large majority of instances a severe crisis is ominous of a profound disturbance, but possesses the advantage of giving a distinct emphasis to the onset of a disease which might, if not so announced, reach an advanced stage before discovery took place.

Dielt's Crisis, so named because Dielt in 1864 described what he called a "strangulation of the kidney," is a sudden attack of pain in the region of either kidney, usually the right, accompanied by nausea, considerable shock, tympany, and marked tenderness of the kidney affected. The pain is usually relieved by lying down and manipulating the kidney. After relief, especially if the pain has been of long duration, there is usually polyuria with possibly hematuria. These attacks are much more likely to come on after a marked exertion, especially that of lifting while in the stooping posture. The pain can usually be distinguished from gall stone colic by the fact that while the former comes on suddenly it is more likely to radiate down toward the bladder, is not as agonizing, and can be relieved by postural change. Moreover, its cessation is more gradual than in gall stone and the flow of urine is not affected thereby. It is more likely to be confused with urinary calculi in that it

is in the region of the kidney, and runs down into the bladder. But here again, it is less agonizing, and is relieved by postural change. Moreover, the kidney is rarely sensitive in the crises mentioned. Not infrequently the pain is mistaken for acute appendicitis of the fulminating type, but the slight degree of temperature and pulse variation caused by the Diel's crisis should preclude such a mistake.

The pathology of the attack is: primarily, a sudden and extensive giving away of the anchorage of the kidney and its displacement sufficient to allow the ureter to become bent, doubled or twisted. If such occurs to the extent of shutting off, in part or in whole, the outflow of urine from the kidney, the natural sequence would be an over-distention of the kidney pelvis and tubules, sensitiveness of the same, and suspension of function. Shock would be a natural consequence upon any tearing loose of internal structures. Nausea would likely follow. If the condition of acute buckling of the ureter should remain for some time there would be an enlargement of the kidney due to the hydronephrosis, together with a diminution of the quantity of urine excreted. The sensitiveness could be readily understood, first, from the immediate trauma due to the tearing of the kidney fastenings, and later from the over-distention. The fact that the pain subsides from postural change is due to the kidney falling back, in part at least, to its normal bed, and thereby relieving the occluded ureter. The most natural symptom then to expect would be an increased flow of urine, as the over-distended pelvis drained itself. Neither would it be at all surprising if there should be some blood in the urine as a kidney suddenly jerked from its moorings, or distended far beyond its normal limits, would quite overtax its smaller blood vessels and the telltale result shows in the urine.

Naturally we are interested to know why a kidney seemingly well anchored in its natural abode should even upon a severe provocation be pulled loose and thus disturb the whole physical economy. As a matter of fact, the kidney will not do so unless there has been a preparation for the accident. For the incidents and accidents which precede the displacement of a kidney, or a so-called "floating kidney," are rather interesting. While the kidney is not held in place by an amount of strong cables, yet it lies in such a snug harbor that there is rarely any pressure which affects it profoundly. Its layer of moulded fat is one of its anchors. Hence, when there is a great loss of fat the kid-

ney becomes deprived of one of its home ties; it begins to think then of wandering, and awaits only a little temptation to start.

Again, intra-abdominal pressure is one of the strong influences which keeps the kidney at home. Once remove that by frequent pregnancies, by the removal of large tumors, by ventral or umbilical hernias, and the kidney, while it has not lost all home ties feels the pull of the outside world, and like the prodigal son, starts off to see how it looks, and generally with about the same result. For if it stays away too long it is no more worthy to be called a kidney. But the kidney is not always to blame for wandering. Sometimes it is forced from home by a sharp blow in the back, and it goes taking most of its home ties with it. In such cases we have a marked shock followed by a hematuria which may be fatal.

It becomes, therefore, readily apparent that a Dielt's crisis is nothing but the acute symptoms arising from a floating or displaced kidney which has descended so low toward the pelvis that it has shut off the calibre of the ureter. Were one to tie a ligature about one ureter, he might get much the same set of acute symptoms. To understand the condition rightly we must bear in mind that there may be the primary attack which comes on immediately after a severe exertion of lifting or straining, or following a blow, and, then are the secondary or recurrent attacks which come on after the kidney has once broken away from its moorings but has come back and remained fairly well in place.

It happens not infrequently, that even after a prodigal son has returned to his home he cannot remain there because he has become so changed in his tastes and habits that he is a misfit in the home. So it also frequently happens that after the kidney has got into the habit of floating back and forth, or has remained away from its proper abode a long time, it cannot be made to stay in place because it is a misfit. Its frequent enlargements from hydronephrosis has so changed its shape and size that it is impossible to put it back or keep it there if it dare go back.

We have now not only a truant kidney to deal with, but a defective one as well, and the time will some day surely come, if reform measures are not instituted, in which it will have to be tried and condemned and executed. For the moment a kidney gets so badly out of place that its ureter is being in the least infringed upon, that moment the kidney has taken the first

downward step for eternal destruction. While reform measures are always possible, they are obviously more promising in the early stages. Given a kidney which has been torn loose from its normal moorings by some severe strain following a lessening of intra-abdominal pressure, and which has given an unmistakable evidence of a displacement and ureter kinking by shock, tenderness, pain, nausea, polyuria, and hematuria, what is the rational treatment? First, restoration; second, rest; third, supporting measures, whether bandages, binder, or compression, any support which will tend to hold the kidney in place.

Now, given a kidney which shows a persistent determination to get out of place repeatedly, after the initial breaking away, and what is to be done? A loose or floating kidney which gives no trouble either in the form of pain, tenderness, nausea, or nervousness, or shows no sign of ureteral obstruction, is an inoffensive sort of a truant that will not do much damage to itself or the neighbors, although like all truants it is abnormal and must be watched. But a kidney which repeatedly goes on a "bat," disturbs the neighborhood and disarranges itself must have some other kind of treatment besides moral suasion. If it will not stay in place by a specially made binder and kidney pad then it must be anchored by the operation of nephrorrhaphy. In my opinion, that operation is not called for in every case of floating kidney, but for such only as above enumerated and for the few where the reflex symptoms are persistent and inimical to health and comfort.

I call to mind a young married woman who for one year could keep no solid food upon her stomach. She had had three children in rapid succession; had been in perfect health, but was now losing flesh and health rapidly. She had received all kinds of treatment for her stomach, with no relief. I found a floating kidney, anchored it, and her vomiting ceased upon leaving the operating table. Even the ether did not induce it. In her case either the drag upon the stomach produced by the nephroptosis or else the reflex effects well nigh cost the patient her life.

We find very frequently large, nodulated, sensitive tumors in the kidney region, which upon careful examination induces us to believe that we have a tubercular kidney to deal with. The greater number of these are in women. Examination of the urine fails to reveal any tubercular bacilli. But they grow

to such size and become so disturbing to health and comfort, and eventually so threatening to life, that we must needs remove them. The examination then shows that they are not tubercular kidneys, but rather cystic, either multiple or single, filled with bloody debris, urine, or pus. Sometimes they are mere kidney shells showing a thin cortex with complete destruction of medullary and parenchymatous substances and having a content of bloody fibrin. These are kidneys which have undergone a mechanical metamorphosis consequent upon a complete or partial blocking of the ureter. They are only diseased because they were not allowed to functionate as they wished and when they wished.

Once upon a time I met a woman who told me this story: She was fifty years old, had had three children with normal confinements. She had, ten years previously, cared for an invalid mother who required considerable lifting. One day after a special effort at lifting, she was taken with a so-called "stitch" in her back in the region of the right kidney and had to be carried to her bed. She remained there a day or two, recovered from the acute effects and went about her work. But from that time until the present she had been "weak" in that side. Shortly after the initial attack she was seized one day with a severe colicky pain near the right kidney which made her quite ill. She vomited at short intervals, but by lying upon her back with her knees drawn up she soon got relief. As time progressed she noticed she was quite prone to have such attacks after any severe exertion, but could terminate them rather quickly by lying down and manipulating over the region of her right upper quadrant. She later noticed quite a disturbance in her urinary function. For a time following the attack she would have a suppression of urine, then a profuse urination. This condition existed for three years or more, when the attacks of pain gradually subsided. She was always tender in that region and had not for the entire period of ten years been entirely free of pain in her right side.

Finally she noticed a good sized lump in her right side just below the liver, which was so painful that their family physician sought counsel. The history was clear-cut and the tumor more so. The latter was nodular, hard, sensitive, slightly movable. The urine showed no abnormality. The case seemed to diagnose itself and I felt no hesitancy in advising the removal of what I regarded as a non-functionating kidney. The opera-

tion was accordingly performed. I found a large kidney so closely adherent to its envelope of fat that it was with difficulty shelled out. The pelvis was greatly distended and very hard. The fact that its cushion of fat was abnormally adherent, that it was greatly enlarged, nodular, entirely outside the kidney fossa, and had been giving her pain for years, were to me sufficient reasons for removing the kidney entire, which I did, ligating the ureter about one inch below the pelvis of the kidney. Upon opening the kidney I found a large stone packed firmly in the pelvis, blocking the orifice of the ureter entirely. The kidney was honeycombed with large cells, which were filled with bloody debris, pus and fibrin. There was little, if any, normal kidney substance left.

In her case it was quite apparent that she had first dislodged her kidney by a severe dorsal strain. Then by her failure to remain quiet until the damage had been corrected she had induced a chronic floating kidney, or nephroptosis, which ever and again caused kinking or buckling of the ureter with a damming back of the urine. Now this stagnation of the urine in the pelvis or the kidney offers the best of opportunities for the formation of renal calculi, just as residual urine in the bladder due to an enlarged prostate cause vesical calculi. Hence, a calculus once started in the pelvis would grow rapidly with little interference. This but acted as a further blockade to the urine, and the time soon came, in which the right kidney ceased to functionate. This, however, was so gradual that nature was given an opportunity to adjust herself to the change and to place the entire burden of urinary elimination upon the left kidney. It was now only a question of time in which the poor wreck of a kidney would go to pieces, holding its wreckage within its impervious cortex.

Now suppose it would have been possible to have recognized the true condition at the initial lesion and by rest and supportive measures to have induced that kidney to again grow fast in its normal position; or, suppose that in her failure to seek medical aid at the first of her injury the true condition had not been discovered until she was having the well marked Dielt's crisis, or failing in that recognition, suppose it would have been possible, as I think it was, to have recognized the true condition when the kidney began to enlarge, would it not have saved the woman ten, five, or even three years of semi-invalidism plus the preservation of a very decent kidney?

It is by keeping before the mental vision a series of pictures, graphically displayed, correctly labeled, and instantly available which makes up the science of diagnosis. To obtain such pictures we are obliged to visit the art galleries of experience, interchange of thought, medical meetings, and text books. It is the men who have the largest collection and who know best how to use it, that become best versed in diagnosis.

DERMATOLOGIC TOXEMIAS OF PREGNANCY: THEIR RECOGNITION AND TREATMENT.

BY

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THE cutaneous manifestations due to the toxemias of pregnancy are no different from the dermatologic manifestations of any other toxemia. True it is that under the stress of gestation certain deviations from the usual types, however, may be present.

I shall first present the more common conditions to be met with during the pregnant state, including the following diseases: Urticaria, angioneurotic oedema, erythema multiforme, erythema nodosum and purpura, all of which I have seen present at one time during the pregnant state.

I shall consider erythema scarlatinaforme, herpes simplex and zoster, pityriasis rosea and pruritis, all of which may be found at varying times during pregnancy.

Finally, I shall have a few words to say on the more rare cutaneous manifestations of pregnancy, such as impetigo herpetiformis and dermatitis herpetiformis.

Urticaria is an intensely itching inflammatory disease of the skin manifesting itself by the presence of whitish or pinkish evanescent elevations of the skin which are of an oedematous character. Urticaria is of sudden appearance. The lesions are whitish or pinkish elevations which are firm and circumscribed with reddish areola (wheals) which are of a transitory nature lasting from a few minutes to several hours, which may disappear only to be followed by the appearance of others. They may vary in size from that of a pea to a large bean, or

may form large irregular areas often the size of the palm of the hand. Any portion of the cutaneous surface may be involved, as well as the mucous membrane, the pharynx or larynx not being excepted.

The subjective symptoms are those of intense itching, stinging or pricking sensations. Those suffering with urticaria usually respond easily to dermographism, which is the artificial production of a wheal by the use of the finger tip or some pointed instrument. This, however, is not always diagnostic of urticaria, because of the fact that those who are not suffering with urticaria may at times respond to dermographism.

Angioneurotic oedema is a type of urticarial manifestation which presents itself by the sudden appearance of circumscribed swellings of the skin which are decidedly red, the face and extremities being special sites of predilection. These swellings come on suddenly, often developing within a few minutes or hours. A lip, an eyelid or an ear may be the only location attacked, often swelling to considerable size. The mucous membranes of the mouth and larynx may as well suddenly undergo intense swellings whereby respiration and deglutition may be seriously interfered with. This type of urticaria may be recurrent. Autointestinal intoxication from some cause or other, whether due to pregnancy the ingestion of articles of diet or drugs, or the result of disturbance of any of the internal organs, is usually responsible for this disease.

Erythema multiforme is an acute, inflammatory, exudative condition; the lesions being erythematous, papular, vesicular or blebs. May be discrete or aggregated in patches of various size and shape; may have mild constitutional disturbance or rheumatic pains or gastro-intestinal disturbance. Subjective symptoms vary from absence to quite severe itching. Extremities, especially backs of hands and feet, nape of neck and face, being sites of predilection. Mucous membranes may be involved. Duration, one to four weeks. Condition usually makes its appearance during the pregnancy of the spring and fall of the year. Angio-neurosis, auto-intestinal intoxication often responsible. Vesicular or bleb type may show central depression.

The varieties of erythema multiforme to be seen are: Erythema annularae—ring-shaped patches with clear centres; erythema circinatum; erythema tuberculatum—nodules or tubercles; erythema papulatum—pin-head to split pea papules; ery-

thema marginatum—marginate patches of especially definite outline; erythema iris—arranged in concentric rings varying in color from pink to purple, consisting of vesicles arranged on an erythematous base.

Erythema nodosum presents acute, inflammatory, deep-seated, round or oval, elevated, nodular-like swellings, hazel-nut to egg size. The nodules, at first firm, undergo softening, but never suppurate; and during retrogression undergo all color changes seen in bruises. They are decidedly red in color, tense and shiny, often painful, and last one week to ten days. Five to twenty nodules usually appear on anterior tibial region, but may be found on forearms and trunk. Appear suddenly, may have co-associated rheumatic pains and joint swellings.

Erythema scarlatinaforme is a desquamative disease observed in constitutional disturbances of pregnancies and toxemias following ingestion of various foods and drugs. Comes on suddenly; may appear on any portion of body; general or local; marginated patches of redness; desquamation third or fourth day; lamellar or furfuraceous; duration a few days to a week; relapses may occur.

Herpes simplex presents acute, inflammatory vesicles grouped upon an inflammatory base; pin-head to pea size, usually located upon the face (herpes facialis) or upon the genitals (herpes genitalis or pro-genitalis). If upon the lips—herpes labialis. May occur on any portion of the face; also on tongue and buccal mucous membranes. Vesicles are at first clear; later become clouded or may become pustular. May or may not rupture with formation of yellowish or brownish crusts. Slight burning and itching may be present.

Herpes zoster—acute, inflammatory—unilateral, may be bilateral. Distributed along course of cutaneous nerves. Groups of vesicles situated upon inflammatory base. Onset preceded by neuralgic pains. Erythema first manifestation, then discrete vesicles clustered in groups. Duration one to two weeks. Transitory pigmentation may follow. May have co-associated hemorrhagic change in vesicles. May be followed by secondary pus infection and ulceration.

Pityriasis rosea presents mildly inflammatory, roundish or ovoid, rose or salmon colored macules or patches covered with fine scales. May have mild prodromal symptoms. Usually limited to trunk. Discrete or confluent. May be slightly elevated. Pin-head to quarter or half-dollar size. Exposed parts rarely

affected. Presence or absence of itching; frequently self-limiting. Two or three weeks' duration. Have onset with mother spot (one individual lesion on some part of body).

Pruritis of pregnancy is a functional disease of the skin manifesting itself by intense itching without apparent cutaneous lesions excepting possibly those produced secondarily by scratching. The varieties are: Pruritis vulvae, pruritis ani, pruritis universalis.

Pruritis hemalis, or winter pruritis, is usually resultant from atmospheric influence. Usually inner surfaces of thighs and calves and ankles or may be general. Generally worse before retiring after undressing. May have co-associated secondary excoriations and eczematous lesions with infiltration. Certain individuals may have "bath" pruritis following bathing, usually lasting from one quarter to half hour.

Impetigo herpetiformis is an inflammatory skin disease, presenting miliary pustules arranged annularly or in clusters, co-associated with constitutional disturbance. The lesions make their appearance as small, superficial pustules. They appear in successive crops, arranged in groups which heal in the center and spread peripherally, sometimes producing annular patches. In time the eruption may become universal. The sites of predilection are the anterior surface of the trunk, the thighs and inguinal region. Associated with the outbreak is temperature rise and chills. Vomiting, dry tongue, diarrhoea and delirium are likely to occur and death result. The disease is exceedingly rare, and most of the cases have been seen in pregnant women. The disease is usually fatal, although a few cases have recovered.

Dermatitis herpetiformis is an inflammatory cutaneous affection. The lesions are erythematous, papular, vesicular, pustular or bulbous, are accompanied by burning and itching, and run a chronic course, at some times better and again worse. In severe cases constipation, chilliness, malaise and febrile disturbance may precede the appearance of the lesions.

The eruption may appear either suddenly or gradually, and may or may not be preceded by itching. There is a tendency for one variety of lesion to pass into another, and prominent symptoms of the condition are burning and itching which sometimes is intense.

Of the different variety of lesions which present themselves the vesicular is the most common. These are pin-head to pea-

sized, either flat or raised, irregularly shaped and quite often without an inflammatory areola. The tendency is to coalesce, but not to rupture, and the itching is frequently intense.

The erythematous lesions occur in marginate patches, or may be efflorescent; may be raspberry-red, mottled, and tinged with yellow or brown, and in the later stages is to be found a degree of pigmentation. Itching and burning are marked.

The bulbous variety are distended, angular, irregular in shape, and appear in groups of three, sometimes more. Erythematous and vesicular lesions may as well be present. Here also the itching and burning is severe.

In the pustular type is found two kinds of lesions; one, small, pin-point to pin-head in size and perfectly flat; the other large, rounded, elevated and having an inflammatory base. The lesions usually appear in groups of three or four. Vesicles and blebs may co-exist.

The papular variety represents the mildest type, while in the multiform type the lesions consist of papules, vesicles, blebs, pustules, erythematous patches and pigmentation, in blended combinations.

The course of the disease is chronic, and usually occurs between the ages of thirty and forty, being due to various causes, such as pregnancy, disordered menstruation, puerperal septicemia, gastro-intestinal disorders, although the nervous system is primarily responsible for the cutaneous manifestations.

The tendency of the eruptions to occur in groups, the intense itching, the chronicity, history and course of the disease are diagnostic points.

With reference to the treatment of these toxemias, my experience has demonstrated to me that the best way to dissolve and get rid of the toxemias responsible for these dermatologic manifestations is to have the patient drink copiously of soft or distilled water—from two to three quarts a day if the patient will do it.

Boiled or distilled water, being a soft water and having been robbed of its mineral properties, acts as a wonderful solvent for these bodily toxemias and aids greatly in the eradication of the dermatologic manifestations.

I am, as well, fond of putting the patient on a four or five days' absolute rice diet, which consists of plain boiled rice with two or three slices of toast, and perhaps a cup of weak tea, three or four times daily.

Of course, constipation must be combatted, and everything done which is possible to assist the body generally. I am also fond of having my patients affected with dermatologic conditions in the pregnant state drink two or three glasses of lemonade daily with very little sugar in it; grape juice, well diluted, the next day; orangeade the following day, and alternating between the three.

The greatest relief is to be had, of course, from the indicated remedy.

Locally, these conditions are practically all treated in the same way; some mild, soothing lotion, ointment or oleagenous substance.

Since these conditions are all non-paratistic and non-micro-organic as well, they naturally demand something which will soothe and calm them; therefore our old friends calamine lotion and ungt. bismuth subnitratis and olive oil emulsion are most admirable. Their combinations are as follows; to be applied three or four times daily, or as is necessary.

Calamine lotion: Pulv. calamine, zinc oxide, boric acid and glycerine, of each two drachms; liquor calcis, q.s., a.d., to make eight fluid ounces, phenol ($\frac{1}{2}\%$).

Ungt. bismuth subnit.: Boric acid, zinc oxide and starch, of each one half drachm; bismuth subnitrate, one half drachm; phenol, one half to one per cent., petrolatum q.s., a.d., to make one ounce.

Olive oil emulsion: Zinc oxide, boric acid, bismuth subnitrate, glycerine, of each two drachms; lanoline, four drachms; phenol, one half per cent.; lime water and olive oil, equal parts of each to make eight fluid ounces.

The following remedies are suggested for the conditions shown below:

Urticaria: Agaricus, anacardium, antipyrin, apis, chloral fagopyrum, urtica urens.

Angioneurotic oedema: Apis, antipyrin, anacardium.

Erythema multiforme: Agaricus, arnica, copavia, rhus tox.

Erythema nodosum: Arnica, belladonna, kali brom., sulphuric acid.

Purpura: Arnica, chloral, crot. horrid., kali iod., lachesis, mercurius, tarent. cub.

Erythema scarlatinaforme: Am. carb., belladonna, hyoscy., terebinth.

Herpes simplex: Aconite, apis, belladonna, bryonia, cantharides, crot. tig., merc. viv., ran. bulb., rhus tox.

Herpes zoster: See same remedies under herpes simplex.

Pityriasis rosea: Borax, mez., nat. arsen.

Pruritis: Aconite, agaricus, cup. met., dolichos, fagopyrum, zinc met.

Impetigo herpetiforma: Ant. crud., ars. alb., calc. carb., clematis, crot. tig., graphites, hepar sulph., kali bichrom., merc. viv., rhus tox, viola tricolor.

Dermatitis herpetiformis: See same remedies under impetigo herpetiformis.

HYPERTHYROIDISM.—It has been demonstrated that 5- to 10- grain doses of thyroid gland will relieve some of the toxemias of pregnancy. The author has had brilliant results follow the administration of thyroid in some cases of vomiting of pregnancy. Besides, following its administration, the nervous symptoms of the menopause disappeared. That the thyroid is entitled to be termed a sex gland is evidenced by comparison of the conditions following thyroidectomy and following the climacteric. The author considers that a majority of the cases of girls from the eighth grade and the first year in the high school who are nervous and choreic are cases of hyperthyroidism. Thus, he had under observation a girl from the eighth grade who menstruated three times at two-week intervals, and was brought to him for the relief of nervous symptoms. She was unable to control herself in her recitations, clumsy in her movements, never quiet, talked loudly, and had a pulse of 120, together with marked tremor, palpable thyroid and headache. The palms of the hands were always sweating. In spite of the patient's youth, this was probably a case of hyperthyroidism.

Some have claimed that a diagnosis of hyperthyroidism should be made whenever there is present for a considerable time a tachycardia which cannot be explained upon any other pathologic theory provided several of the minor symptoms, though neither exophthalmos nor goiter, are present. In two cases the author was able to make such a diagnosis, which was later confirmed, in one case by exophthalmos and goiter, and in the other by exophthalmos.

The author has seen one case in which trauma seemed to have been a causative factor. A girl twelve years old, in playing ball, was struck in the neck. In a few days she developed a considerable goiter, which continued for some time without any hyperthyroidism, when rather suddenly, after three months, she developed violent symptoms of hyperthyroidism. The thyroid secretion had probably been blocked in the lymph-channels and then set free in a very large dose.—B. S. Walker (*Iowa Medical Journal*, February, 1914.)

EDITORIAL

THE COMING MEETING OF THE STATE SOCIETY.

EVERY homœopathic physician in Pennsylvania should make preparations now to attend the annual meeting of the State Society which will be held at Wernersville, Pa., September 24th, 25th and 26th. There is every indication that this meeting will be a highly important and enthusiastic one. The President, Dr. Leon T. Ashcraft, has visited practically every portion of the State during the past six months and has received assurance of enthusiastic support and co-operation in carrying on the work of the State Society from all of the local organizations.

In appointing chairmen of Bureaus, the President has been fortunate in securing representative men from various parts of the State. The names of the chairmen are as follows:

Bureau of Pathology—Dr. John G. Wurtz, Philadelphia.

Clinical Medicine—Dr. Jacob E. Belville, Philadelphia.

Ophthalmology, Otology and Laryngology—Dr. William Speakman, Philadelphia.

Pediatrics—Dr. Boyle, Pottsville.

Materia Medica—Dr. B. F. Books, Altoona, Pa.

Surgery, Gynecology and Obstetrics—Dr. R. White, Scranton, Pa.

Sanitary Science—Dr. Albert R. Garner, Norristown.

It is hoped that every member of the Society who may have any contribution to make will communicate with the chairman of the proper bureau as soon as possible as the programs are now almost complete.

After conferring with a number of members of the Society, the trustees and the officers have deemed it wise to adopt the policy to limit the papers to fifteen minutes and the discussion to five minutes. While the by-laws of the Society provide for such limitations, they have been but rarely enforced and it is believed that it will facilitate the business and scientific transactions of the Society to adhere strictly to these provisions of

the by-laws. Much of the time of the Society in the past has been taken up by long dissertations that have little bearing on the subject under discussion and this has resulted not only in delaying the work of the organization but in detracting from the interest of the meetings. There are but few instances in which a member should not be able to state all important thoughts that he may have on a particular subject within the time limit set by the Society, if he will confine his remarks strictly to the subject under discussion.

The social features of the meetings have been well looked after. Galen Hall is beautifully situated and, during the latter part of September, the climate at Wernersville is ideal.

A number of important changes in the administration and management of the Society will come up for consideration and every member is urged to be present to take part in the discussion of these changes.

G. H. W.

THE FATALITY OF MODERN WARFARE.

Now that practically all European nations have been drawn into a conflict which promises to be one of the most deadly in the history of mankind, we are likely to have fully demonstrated the effectiveness of modern arms.

The most recent data that might serve as a guide in judging this question, has been obtained from surgeons who followed the troops in the recent war in the Balkan States.

A study of the statistics of the Bulgarian troops indicates a high percentage of wounds and fatalities. The Bulgarian troops on the field numbered 500,000 soldiers. Of these 46,000 were killed and 115,000 wounded. This means that more than one third of the army were either killed or wounded.

Some figures given by Dr. Laurient, who followed the Balkan troops for eleven months, show forcibly the death dealing powers of modern arms. He states that during a period of six days, from June 30th to July 5th, 1913, eighty thousand men were either killed or wounded on the banks of the Bregalnitsa.

In studying the causes of death, it has been found that the highest mortality resulted from wounds of the head—fifty-five per cent.; wounds of the trunk cause from thirty to forty per cent. of deaths and wounds of the limbs, five per cent.

It is interesting to note that wounds of soft tissues by high speed bullets often produce very trivial results. These bullets seemed to pierce through the tissues and pass out the other side, leaving only insignificant traces which healed rapidly.

The effects of the bullets on the long bones varied somewhat. At times, especially if the bullet entered near the epiphysis, the damage to the bone was slight. In other instances the bone was markedly shattered and serious complications arose. The percentage of cases in which amputation was necessary was less than one per cent.

Laurient states that if the same proportion of fatalities that prevailed in the Balkan war should occur in a campaign between any of the large European powers there would be not less than 1,500,000 dead and wounded in the course of the first month.

G. H. W.

PITUITARY EXTRACT IN THE TREATMENT OF HEMOPTYSIS.—The author tried intravenous injections of pituitrin in twelve cases of abundant—though not “fulminating”—hemoptysis, with excellent results. The dose used was 0.5 c.c., and the injections were made into a vein at the elbow. Whereas ice and morphine had proved ineffectual, the injection of the pituitary preparation was followed almost immediately by cessation of the hemorrhage in ten out of the twelve cases. The patients continued to expectorate blackish material for a few hours, but the flow of fresh blood was clearly arrested by the remedy. Where the hemorrhage recurred on succeeding days, the same prompt relief was obtained. In the eleventh case the first injection alone proved effectual, while in the twelfth the first injection, though soon successful in its results, at first caused sudden pallor, vertigo, and a rise of blood-pressure from 80 to 95 mm. Hg., with primary increase in the amount of hemorrhage for two or three minutes. The author thinks such phenomena can be avoided in the future by diluting the remedy with a few cubic centimeters of saline solution and injecting very slowly.

In discussing the author's communication, another observer pointed out that in 1909, with Boyé, he had shown that extracts of the *posterior* pituitary lowered the coagulation time of the blood where this was increased. Livon soon after found the coagulant properties of the extracts were so intense that no blood-pressure tracings could be taken from the dogs experimented on, the blood at once clotting in the cannulae. He believed the results obtained to have been due rather to this coagulant action than to diminished blood-pressure in the pulmonary circulation. (P. E. Weil.) E. Rist (Bulletins et Memoires de la Societé médicale des Hôpitaux de Paris, April 24, 1913; New York Medical Journal, September 6, 1913).

LIST OF HOMOEOPATHIC PHYSICIANS IN PENNSYLVANIA WHO ARE NOT MEMBERS OF THE STATE SOCIETY.

Below you will find a list of physicians throughout the State who are at present not members of the Pennsylvania Homœopathic Medical Society.

Can we as homœopaths afford to have so large a number outside of the ranks of the State Society? They need us and we need them; it is only by building up a strong State organization that we can expect to accomplish a great deal, either for ourselves or our clientele.

Go over this list which is printed alphabetically, according to counties, find your friends or nearest neighbors and get after them in such a manner as they cannot refuse to join the State Society.

You will find a membership blank in this issue and if you require more, kindly communicate with Dr. Chas. A. Ley, 1209 First National Bank Building, Pittsburgh, Pa., Chairman of the Membership Committee.

Allegheny—

Ben Avon. H. O. Mateer. Braddock, Edward W. Dean, Sheldon Hicks, George H. McGeary, Anna B. Watts. Duquesne, Blanch Jackson, George B. Martin. Etna, I. R. Baumgartner. Homestead, Charles C. Huff. McKeesport, George W. Kerns, 616 Market street. Pittsburgh, Walter Bingaman, 7040 Hamilton avenue; Wm. B. Boggess, 4919 Centre avenue; John C. Cooper, 1004 Cedar avenue; Wm. Cowley, 219 Wallace Bldg.; Henry H. Doyle, 521 Negley avenue; Wm. E. Franklin, 1505 Wylie avenue; Wm. C. Harmount, 175 S. Lang avenue; Carl Hornecker, 204 Forbes Bldg.; D. D. Lerch, 3611 California avenue; Chas. E. Peach, 522 Tarleton avenue; James K. Perrine, 5225 Centre avenue; Rose V. Pitcairn, 716 Arch street; Wm. C. Ranson, 2308 Centre avenue; Walter Rohrkaste, W. Liberty and Albama; Bailey Sullivan, 1513 Lincoln avenue; Robert Wallace, 8071 Jenkins Arcade; Thomas Wallace, 1413 Penn avenue; George B. Wix, 202 Werner Bldg.; Harry Zimmerly, 5204 Second avenue; Mark Zopfle, 1713 Fifth avenue, R. K. Fleming. Sewickley, Thomas Grimes. Tarentum, George W. Getz, Jas. M. Knowlton. Wall, Albert Robinson. Wilksburg, A. B. Smith.

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Ford City, Jesse E. Ambler.

Beaver—

Ambridge, E. W. Shields. Beaver Falls, Homer Bryan. Monaca, Melvern N. Mackal. New Brighton, Walter L. Cross, Thomas McNish, Sam. H. Pettler.

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Hamburg, P. O. Bernharts, Fred J. Isett. Birdsboro, Isadore L. Peters. Reading, Leon Driebellis. Shillington, Chas. T. Haines. Walter Park, Robert L. Walter.

Blair—

Altoona, Olin K. McGarrah, 825 8th street. Bellwood, Forrest B. Fletcher. Frankstown, Webster Calvin, J. A. Gold.

Bradford—

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Butler—

Evans City, J. M. List. Porterville, J. A. Shafer.

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Carbon—

Leighton, Frank Dreibellis. Mauch Chunk, Stewart Kirby.

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Snowshoe, Ed. H. Harris. State College, Wilmer Kipe.

Chester—

Berwyn, George W. Mitchell. Coatesville. Henry E. Porter. Downingtown, M. Mercer, E. C. Winsmore. Kennett Square, Alpheus Gregg. Oxford, John F. Rose. Phoenixville, Chas. M. Benham, West Chester, Clyde E. Ehinger. Levi Hoopes, Chas. R. Palmer.

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Lawrence—

New Castle, Sam Warner, 118 S. Jefferson street. Pulaski, Jas. A. Shaffer.

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Horning, Chas. T. Shinn, Dan Wilson. Pottstown, Wallace W. Dill. Telford, John K. Hedrick.

Montour—

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Bldg. Niles M. Miller, 4100 Walnut street. Nicholas Mitchell, 1505 Spruce street. Wm. S. Moat, 212 Flanders Bldg. John F. Monell, 6429 Vine street. Wm. B. Marford, 1444 Tasker street. Fred Mount, 1216 Locust street. Martin Nevinger, 2131 W. Dauphin street. George W. Newman, 7959 Rising Sun avenue. H. C. Nicholson, 2000 Wallace street. Albert Norris, 4814 Chester street. John J. Oechsle, 541 E. Thompson street. Rob. A. Patterson, 510 Perry Bldg. Wm. Peacock, 2217 N. 6th street. Wm. A. Ploucher, 3332 Howell, Wissng. Jos. W. Post, 809 W. Erie street. Wm. R. Powell, 1701 Chestnut street. Howard E. Randall, 34 S. 16th street. Rufus Reed, 720 Witherspoon Bldg. Herbert Reynolds, 4629 Richmond. Charles Robelen, 1200 S. 52nd street. Ed. A. Robinson, 6505 Germantown avenue. Maximilian Roedmann, 1631 N. 15th street. Philip C. Sanderson, 542 N. 10th street. Norman Saylor, 84th and Bartram. Clayton Schwenk, 2040 N. Broad street. Jas. P. Scott, 1419 Girard avenue. Oscar Seely, 318 Perry Bldg. Lemuel T. Sewell, 1114 Fitzwater street. Charles H. Seyfert, 5624 Girard avenue. Ed. E. Sharpless, 1624 N. 18th street. John R. Shetter, 1513 Shunk street. Jas. S. Shoemaker, 3112 Frankford avenue. Wm. L. Shoemaker, 2248 Howard street. George E. Simmer, 2512 N. 6th street. Thomas Skirving, 219 E. Wistar street, Gtn. Frank Slaughter, 1429 Girard street. Louis F. Smiley, 117 N. 11th street. Nathan Smilie, 624 Weightman Bldg. Alfred Smith, 1110 E. Montgomery avenue. Benners Smith, 2842 N. 24th street. Chas. H. Smith, 3025 Frankford avenue. George L. Smith, 5538 Wayne avenue, Gtn. Ernest Smith, 1425 N. Broad street. George L. Sobers, 670 N. 13th street. Wm. Sonneborn, 2311 E. York street. Fletcher Souder, 1803 N. 15th street. Ralph L. Souder, 2314 Reed street. Jos. A. Stegnem, St. Luke's Hospital. A. G. Stetson, 5903 Walnut street. Knox Stewart, 37 N. 38th street. Wm. Stiles, 1939 Fairmount avenue. Wm. Suplee, 2318 S. Broad street. Willard B. Terry, 727 S. 60th street. Ed. H. Thompson, 2118 Orthodox street, Fkd. Fred Traganza, 2009 N. 22nd street. Wilmer Trinkle, 1438 N. 13th street. Robert Tudor, 29 N. 13th street. Jas. M. Tyson, 709 E. Chelton, Gtn. Fred Van Gunten, 1333 N. 12th srteet. C. V. B. Vedder, 5731 Baltimore avenue. LeRoy Walker, 2218 N. 13th street. John Ward, 126 S. 39th street. Rufus Weaver, Hahnemann Med. College. Lamphear Webb, 1426 Diamond street. Chas. Wells, 773 N. Preston street. Lewis C. Wessels, 1918 N. 22nd street. John J. Whelin, 4353 Paul street, Fkd. Frank Widman, 1637 Girard street. Wm. G. Widmayer, 805 W. Lehigh avenue. Herbert Williams, 2 N. 50th street. Rutledge Wilbank, 505

Tasker street. Jos. R. Witzel, 2615 Bridge street. Albert F. Wolf, 1800 Cayuga street. Wm. Yeareley, 2027 N. 15th street.

Schuylkill—

Ashland, Lyon A. Snyder. Mahanoy City, Abraham Seligman. Minersville, Francis Quinum. Pine Grove, or Phoenixville, Howard Terry. Jr.

Somerset—

Somerset, S. Mcl. Wilson.

Susquehanna—

New Milford, Clarence A. Hull.

Tioga—

Mainsburg, Harry C. Harkness. Mansfield, Clarence Klaer. Nelson, G. C. Burnley.

Union—

Mazeppa, S. A. Diffender.

Venango—

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Warren—

Warren, G. S. Davies, J. N. Davies, L. B. Sayles. Youngville, W. M. Hays.

York—

Hanover, Chas. Wagner. Red Lion, Harry Howden. York, Julia Crawford, 139 E. Market street; John E. Dehoff, 485 W. Market street; John MacDonald, 335 E. Philadelphia street.

Washington—

Donora, Sam Edmunds.. Monongahela, John C. Brisbane. MacDonald, J. A. Douglass. Prosperity, J. Cary. Washington, H. P. Cristman, J. M. Maurer.

Westmoreland—

Irwin, J. R. Bartlett. Mt. Pleasant, J. DeWitt Dickey. New Kensington, R. M. Powers.

York—

Hanover, Clayton E. Bortner, Oliver T. Everhart.

GLEANINGS

TREATMENT OF LOOSE TEETH DUE TO INFLAMMATORY DEGENERATION OF THE GUMS AND ALVEOLAR PROCESS.—The *Journal of the American Medical Association* of December 20, 1913, contains an article by Head in which he gives excellent advice. An efficient mouth-wash for use at home consists of a saturated aqueous solution of sodium silicofluoride which amounts to a 0.61-per-cent solution. This, when held for a minute in the mouth, morning and evening, and freely swashed for at least a minute through the teeth, is a great assistance in relieving inflammation of the gums. Like the bifluoride it seems to restrain the disposition of tartar on the teeth, except in about one per cent of cases, in which it seems to increase it slightly. But even in these cases the gums heal promptly and the superficial deposit is easily removed from the teeth with brush and pumice. The disagreeable flavor of the solution can be disguised by adding an equal amount of sodium chloride or a judicious quantity of aromatics.

A tooth-powder that will liberate enough free oxygen to make from 40 to 50 drops of a 3-per-cent peroxide solution for every 10 grains used on the brush in the mouth is as follows:

Magnesium peroxide (200-mesh sieve), 60 parts;

Sodium perborate, 30 parts;

Castile soap and flavoring, 10 parts.

This can be used morning and evening for brushing the teeth and should be swashed around the interstices for a full minute before being ejected from the mouth. Without thorough cleansing and brushing of teeth morning and evening antiseptic washes will, however, be of no avail. Since the tooth-brush cannot cleanse between the teeth these surfaces should be swept free from bacterial deposits with floss-silk morning and evening, and the teeth and gums thoroughly brushed with strokes not less than an inch and a half long, and rotary wherever possible. The brush should be small, not over an inch and a half long, the bristles not over a quarter of an inch, and narrow, so that when the mouth is partly opened the brush can be placed between the ramus of the jaw and the third molars. Most brushing does not extend beyond the spring of the bristles, which instead of giving bristle friction merely pivots the bristles without cleansing. The upper and lower third molars more frequently decay and are subject to pyorrhea alveolaris simply because they are not cleansed. Structurally, they are not weaker than

any other teeth. At each visit of a patient it is most essential that the necks of all the teeth be examined for bacterial plaques that may have been accumulating undisturbed since the last visit. The patient should be shown what movements of the brush are necessary for their removal, for a final test of a method of brushing the teeth and gums is, Does it clean away the bacterial plaques? Ninety-nine out of a hundred cleanly people never brush the thick bacterial plaques from their third molars, nor, as a matter of fact, from half the other teeth, simply because they have never been taught how. Gums as well as teeth should be thoroughly brushed twice a day of all bacterial plaques. Observation of his patients, Head asserts, proves that healthy gums are no more injured by vigorous brushing than is the skin adjacent to the finger-nails. Inflamed soft gums will unquestionably be made sore for the first week or two, but persistence on the part of the patient and assistance on the part of the dentist in touching up the sore spots with silver nitrate will soon strengthen the gums to almost any friction the tooth-brush can give them.

The question of vigorous cleansing and massaging the gums with the brush is not only a question of removing external films of infection, but is also for the purpose of producing an autoinoculation that will create antibodies in the blood for the purpose of combating the disease, a vigorous massage of the parts causing a local hyperemia, which enables the antibodies in the blood to come into more intimate contact with the infecting bacteria. This is a most important phase in the cure of pyorrhea, and one that has not been sufficiently emphasized. The formation of antibodies for the cure of pyorrhea is a means of eradicating pyorrhea from the system. The autoinoculation caused by vigorous gum brushing combined with the judicious use of carefully prepared vaccines has given results in the way of a systematic improvement that are little less than marvelous.—*Therap. Gazette.*

CALCIUM IN THERAPEUTICS.—Calcium not only enhances the coagulating power of the blood, but also renders morbidly permeable vessel walls less permeable. The latter effect is strikingly evident in hemorrhagic affections, such as scorbutus. This hemostatic effect can be anticipated only in case of bleeding by diapedesis. The absorption of calcium salts, moreover, depends on a variety of factors, especially on good gastric secretion and on the absence of fermentation acids in the intestine.

The author detected the abnormal permeability of the vessels responsible for the rebellious hemorrhages of scurvy in one case by applying a cupping glass for five minutes. The vacuum glass drew blood as before after two weeks of treatment by the ordinary measures. The author then gave the patient 3 Gm. a day of calcium lactate for five days, after which the cupping glass no longer drew blood, and complete recovery followed after three weeks of the same treatment.

The author also found calcium lactate useful in two cases of iodine poisoning from a course of potassium iodide. A further useful application is in curing the cutaneous manifestations of anaphylaxis. In pleurisy with effusion the fact that the calcium renders the vessel walls less

pervious has an unfavorable side, as this checks absorption. Its use is indicated, therefore, only when the effusion constantly recurs after puncture. When the walls of the pleura are severely modified by chronic inflammation, calcium has no effect. Animals develop cachexia when given calcium salts over a long period. In 15 cases of hemorrhagic nephritis the results of calcium medication were inconstant, and in some the condition was aggravated.—*Von den Velden (Therapeutische Monatshefte Monthly Encyclopedia of Medicine)*.

THE INTERNAL SECRETIONS AND THE FEMALE CHARACTERISTICS.—The ovaries alone are not responsible for the female characteristics. Although the potentiality to produce femininity exists in the earliest stages of segmentation of the ovum, this potentiality is directed toward the future development of correlations of the endocrine glands which are to control the sexual evolution of the individual. It has been shown that the suprarenal cortex is largely responsible for the secondary sexual characteristics. Although the genitalia may be normal morphologically at birth (primary development), they become functionally active only at puberty (secondary development), if the whole endocrinous system is in perfect harmony and acting efficiently. Thyroid or pituitary insufficiency may cause the genital organs to remain infantile, and disease of these structures may cause retrogression in the genitalia even after they have functionated normally. Removal of the thyroid alone produces an intense degree of atrophy in the uterus. The ovaries, however, do not retrogress; on the contrary, there appears to be increased activity, especially in the follicles. While adrenal hypernephromata in male children are practically always associated with precocity of the sexual organs and secondary characteristics, in female children with adrenal hypernephromata the sexual organs are not precociously developed, for the tendency is rather to produce in them the characteristics of the male—a deep voice, enlargement of the clitoris, hirsuties, etc.

An excessive ovarian secretion leads to an increase in sexual activity both locally and generally. The local effects may be seen in an increased and prolonged menstruation. An excessive ovarian secretion affects the metabolism in the opposite way to oophorectomy, and one of the most important metabolic disturbances is the abnormally large excretion of calcium salts. Bossi suggested the ejection of epinephrin as an alternative to oophorectomy. Apparently many cures have been effected by this treatment, and also by the injection of pituitary extract.

Thyroid insufficiency always causes a disease in or complete cessation of the function of menstruation, according to the degree insufficiency of pituitary secretion is associated with amenorrhea or scanty menstruation. An excess of pituitary secretion, such as occurs in acromegaly, produces masculinity, and while in the male this may give rise to excessive sexuality, in the female it causes amenorrhea and loss of desire, as is only natural if masculinity be produced.—*Blair Bell (British Medical Journal; Charlotte Medical Journal, February, 1914)*.

SUCCESS IN THE PRACTICE OF MEDICINE.—Collie states that in these days wealth not knowledge, ostentatious display not ability, is worshipped

by the majority of mankind. It has been said that physicians are judged by the creases in their trousers, not by the creases in their brain. Wealth determines status. To make money is therefore a necessity. The physician should remember that the cards must always be shuffled, and if patients leave him, from a business point of view it does not really matter if his total income for the year is as large or larger than the year before. His object should not be to have the largest but the best practice. If the physician attends patients gratuitously he should take as his reward the pleasure he is entitled to if he is seeing them without any hope of benefit; but he should remember that this is charity not business. Successful men never neglect the treatment of a patient's personality. It is always difficult to listen to the recital of an irrelevant family history and of details which are obviously unimportant. The details may be trivial but it is a fundamental truth that the physician cannot succeed in treatment unless he has the confidence of his patient, and this he certainly will not have if he does not listen to the recital of the patient's woes. The torrent may often be stopped by a well-directed remark which shows that the physician has divined the whole history.

Success may take the form of financial gain, social aggrandizement, or self-satisfaction. Apart from the proper provision for one's old age and for one's dependents, financial success is not desirable in the medical profession, for it cannot be attained (except by the few) without making sacrifices which are inimical to the growth of those qualities which ennoble one's work. Social success is Dead Sea fruit. The success which brings true self-satisfaction is the Mecca to which the practitioner should be guided, for unlike the above ephemeral successes, but like the heaven and hell of the new theology, she is with him now; if he would woo her successfully she is his abiding portion. To be successful the practitioner should know how to depute work to others—work of which they are capable but which if performed by the practitioner himself would interfere with the proper development of his career. The hard-worked general practitioner who does his own dispensing or his own bookkeeping has much to learn, but he is probably one who never will.

An important detail in medical economics is the precaution that in arranging for partnership or assistant agreements the physician should commit the bargain to paper at the earliest possible date, and this should always be done before the new arrangement; most people mean to act fairly by one another, but no one has a memory which is perfect, and verbal contracts are apt to be remembered only in part.

The road to success is well described in the following pointed paragraph from Claye Shaw: "Whatever way success is achieved, there are four mental necessities, namely, a clear view of the end, a judicious indifference to the sentiments aroused by the sweeping away of obstacles, and indomitable energy, a power to resist the temptation to rest on the soporific plains of mediocrity."—*British Medical Journal*.

LUES: THE INCORRIGIBLE.—One of the fairest and most straightforward presentations of our present knowledge concerning syphilis and its treatment is presented by Cunningham in the *Medical Record* of March 21, 1914. He begins his article with this striking sentence: "We

have shot our last bolt, made our last bombastic boost, exploited to the limit the patented panacea of the new Apostle Paul, and we are still confronted with the unpalatable truth that in lues our medication offers no assurance of success. After a faithful adherence to the prescribed treatment, the luckless luetic who is entering on the long martyrdom of locomotor ataxia might well exclaim in the manner of the Bard of Avon, 'A pox on both your houses! salvarsan and mercury.'

It having been demonstrated long since that mercurial treatment does not by any means prevent late syphilitic manifestations, which are apparently due to the hiding of the specific parasite in portions of the body where it was not hitherto known to exist, it is also becoming more and more evident that treatment by salvarsan, however efficacious it may be in destroying the spirochætæ in secondary lesions, is as ineffective as mercury in preventing locomotor ataxia and paresis; or, in other words, it is essential not only to use salvarsan in the early and late stages of syphilis, but to accompany or follow it by the administration of mercury as vigorously and for as long a time as we have been accustomed to do heretofore. Cunningham goes so far as to assert that nothing more is to be expected from salvarsan than from mercury, and that neither of these drugs is a preventive of the deplorable consequences of syphilitic infection; or, as he well puts it, "the outer works may be swept clear of the enemy, but the citadel is still in its hands." In other words, it is beginning to look as if a patient suffering from this disease has been only partly rid of the danger of late nervous manifestations, and partly rid of the danger of transmitting the disease to his offspring. It is a noteworthy fact, too, that in many instances those patients who lead the most correct and abstemious lives, after infection, and who are encouraged by their good health to believe that they are well, nevertheless ultimately are stricken with cerebral or spinal maladies and reach a miserable end by their development. Possibly the very fact that many syphilitics escape nervous manifestations for such long periods after infection serves to deprive the disease of the degree of horror which would be attached to it if the sequence of events followed one another more closely.

As an illustration of the fact that we still have much to learn concerning this malady and its treatment the extraordinary immunity possessed by women to nervous syphilis stands out prominently. Sexual excesses and alcoholism, which are supposed to add to the chances of a man developing paresis or ataxia, are equally active factors in many women who are syphilitic, yet they escape nervous symptoms. Why the spirochætæ should attack the cerebrospinal system of a man and fail to attack this system in a woman is one of the puzzles not as yet solved. This puzzle is the more difficult of solution because the disease produces just as active changes in the cutaneous, mucous, and other tissues of the body of women as in males. Another puzzle exists in the fact that certain men who are actively treated develop nervous lesions, and others who are notoriously careless as to treatment frequently escape. So far the important lesson is not only are repeated doses of salvarsan essential, but that active treatment by mercury is just as necessary as if salvarsan was not used.

All these facts lead Cunningham to make a vigorous denunciation of the means by which syphilis is usually acquired, and he vigorously attacks the commonly held view that self-restraint is unwise or impossible. He urges that the ghastly ultimate results be constantly brought before the minds of men whose moral tone cannot be sufficiently increased to make them restrain themselves because of it. As he well says, "Displays of temper are avoided in many instances because the individual knows that he will be punished for such a display. In one case the punishment comes at once; in another, perhaps twenty years later."

Cunningham does not attempt in this article to deal with the moral aspect of this question, but takes it up solely from the standpoint of hygiene and common sense, and ends up with these vigorous words: "If men will dance to the moans of outraged virtue they will pay in the coin of idiocy, ataxia, and premature death." Almost every medical man of experience knows that this is true. The chief difficulty is that the medical man is consulted after the fire has burned its way into the tissues and not before exposure has taken place. It would be wise if those who are interested at the present time in the campaign against the social evil would obtain permission to reprint this article and distribute it widely where it will do most good.—*Editorial Therap. Gazette.*

NASAL ACCESSORY SINUSES IN CHILDREN, AFFECTIONS OF.—Inflammatory affections of the nasal sinuses occur more frequently in children than is generally considered. Chronic sinusitis is not as frequent as in the adult, but both acute and subacute sinusitis are common, and many instances of postnasal catarrh are but symptoms of some inflammatory condition of the adjacent sinuses. Inflammation of the maxillary sinus at an early age is not infrequent.

Most important in the child are the inflammatory affections of the ethmoid cells, these cells and the antra being more frequently involved than the frontal and sphenoidal sinuses.

It is rather unusual to have a single sinus involved to the exclusion of the others.

The frequency of the infectious diseases in childhood and the concomitant inflammatory changes of the nasal mucosa explains why the sinuses should be involved during this period, and especially does this occur in influenza, scarlet fever, measles, pneumonia, and diphtheria.

In the newborn antral sinusitis may occur as a result of infection by vaginal discharges from the mother or from injury the result of instrumental delivery.

The recognition of the various sinus affections in the child is more difficult than in the adult, as the subjective symptoms are not clearly defined. Great weight should be attached to the intranasal findings. Transillumination is of great value, providing it is used in connection with a regulating rheostat to measure the intensity of the illumination. The author has found of considerable use, when its introduction was possible, the electrically illuminated pharyngoscope; with it one can explore readily the nasal areas and the recognition of posterior ethmoid and sphenoid disease is much facilitated. Carefully made Rontgen

plates are of great service, especially as regards the presence of pus in the antra or frontal sinuses, and previous to the tenth year the use of the stereoscopic radiograph is the most valuable single diagnostic medium available. A markedly swollen mucous membrane, however, will give a shadow more clearly than the presence of pus in a sinus.

The presence of frequent headache should always occasion suspicion of sinus inflammation, as should also tenderness to touch over the suspected sinus (frontal especially). In acute sinusitis, pain of an aching character or acute, neuralgic in type, even like that of the adult, is almost invariably present at some time. The degree of pain in the head, however, very often bears no relation to the severity of the inflammatory process of the particular sinus involved. A dull pain between the eyes in the presence of other intranasal symptoms strongly indicates ethmoid involvement. A symptom of great diagnostic value, when present, is the cessation of pain with the appearance of free nasal discharge, and the return of the pain when the discharge lessens or temporarily ceases. Curiously in purulent sinusitis in children the nasal chamber may be entirely free from pus during irregular periods of the day; care must be taken in considering this, as serious errors might otherwise result. If there is lymphoid tissue in the vault of the pharynx, most marked on the side from which this discharge comes, often the adenoids alone are not the source of the continued coryza from which the child suffers, but in addition there is a sinusitis.

In the so-called strumous child, where there is a purulent nasal discharge, with excoriated upper lip, marginal keratitis, and frequently corneal ulcers, purulent sinusitis, usually of the antrum and ethmoid cells, exists, and, while serious organic osseous changes are not usually present, yet when they do occur the ethmoid structures are the ones most frequently involved. Polypoidal degeneration, when it occurs, is strongly indicative of a latent specific basis.

The treatment of sinusitis in the child should always aim to destroy as little tissue as is consistent with obtaining permanent results. Palliative treatment will cure the majority of acute sinus inflammations, e.g., the use of warm alkaline sprays, or normal salt solution, and a weak epinephrin solution to reduce the congested mucosa, with, if the case is severe, rest in bed, the employment of laxatives and such general measures as may be indicated. The local employment of cocaine in the acute cases is usually unnecessary and is to be deprecated. Much relief may, however, be obtained by the external local application of heat or cold, or the use of the steam atomizer.

Where the sinus disease has continued and resists treatment, it is well to obtain a culture of the micro-organisms present in the sinus and have prepared an autogenous vaccine. Intranasal treatment is indicated in all cases of sinusitis in children, but the turbinal tissue should as far as possible be preserved.—*Monthly Encyclop. of Medicine.*

A CLINICAL STUDY OF HYPERTENSIVE CARDIOVASCULAR DISEASE.—Jane-way, writing on this topic in the *Archives of Internal Medicine*, arrives at the following conclusions:

1. The most prominent symptoms associated with high blood-pressure

are circulatory rather than renal. The disease underlying high arterial pressure is predominantly a disease of the circulatory system, and is best designated hypertensive cardiovascular disease, either primary or secondary, when preceded by an inflammatory nephritis.

2. Death in this type of cardiovascular disease, among patients in private practice, occurs in the following ways, arranged in the order of their frequency: First, by gradual cardiac insufficiency; second, with uremic symptoms; third, by apoplexy; fourth, from some complicating acute infection; fifth, in an attack of angina pectoris; sixth, from purely accidental and unrelated causes; seventh, in a paroxysm of acute edema of the lungs; eighth, after the manner of cachexia.

3. The early symptoms associated with hypertensive cardiovascular disease have an important prognostic significance which can be utilized therapeutically, particularly for the institution of safeguarding treatment.

4. The early occurrence of symptoms of myocardial weakness, especially dyspnea, indicates a more than 50 per cent probability of an eventual death by cardiac insufficiency. In these patients, to safeguard the heart is the main therapeutic indication.

5. The early occurrence of anginoid pain or exertion does not indicate a probability of death in an anginal paroxysm for more than one-third of the patients. It does indicate a probable cardiac death of some type. The therapeutic indications here are similar to the foregoing, except as modified by the existence of syphilitic aortitis. Anginal attacks as compared with other cardiac symptoms do not materially affect the expectancy of life.

6. Polyuria, particularly if nocturnal, indicates the probability of a uremic death for more than 50 per cent of the patients. It is not essential to safeguard the heart in these patients, unless associated cardiac symptoms exist.

7. Headache, especially that heretofore described as typical, indicates the probability of a uremic death for more than 50 per cent of the patients, and of death from apoplexy for a considerable number of the remainder. The therapeutic indications are similar to those of polyuria.

8. Loss of flesh, if marked and progressive, is a symptom of bad prognostic import.

9. The relation of the height of the blood-pressure to prognosis is doubtful. Systolic pressures persistently well above 200 mm. Hg. seem to indicate a greater probability of death by uremia or apoplexy. The exact height of the blood-pressure does not seem to have much bearing on the expectancy of life.

10. The average duration of life in this group of patients, after the onset of symptoms associated with high blood-pressure, has been four years for the men and five for the women. One-half of the whole number of deceased died during the first five years. One-quarter of the number lived between five and ten years, and the remaining quarter over ten years from the appearance of the first symptoms. The existence of this considerable number of patients living for a long period of time suggests the need of great caution in making a prognosis as to expectancy of life.

PHLEBITIS, TREATMENT OF.—The entire body should be bathed daily with alcohol and water, supplemented with a soapsuds cleansing twice a week. Following such a bath the skin should be well rubbed, thus increasing the superficial circulation and drawing away blood from the point of disease. The bed-clothing should be light but warm. Flannel night-dresses serve best. If possible the involved part should be exposed to the direct sunlight for at least one hour daily. All cases seem to have a shortened convalescence upon following out this rule.

The alimentary tract should be very closely watched in order that the bowels may move twice in each twenty-four hours. If they will not do so naturally, a mild cathartic should be given. Three times a week a high enema should be administered. The diet in suppurative cases should be liquid. The broths and soups should be strained, the fruit juices should not contain any pulp, and the milk should be diluted with water and the proper amount of lime water added. Water should be given very freely.

When suppuration is present, as a complication of the venous condition within a serous cavity, far better results are obtained if the patient be Ochsnerized, everything except water being withheld for intervals varying from three days to a week.

As for local treatment, in *acute* cases the limb should be elevated upon a well-padded inclined plane at an angle of 45 degrees, and wrapped in sheet wadding or absorbent cotton held in place by very light gauze bandaging. Under no circumstances should the part be massaged. It is well to bathe the skin with an alcoholic solution, using a soft sponge and avoiding rubbing. Dry the skin by fanning and then dust with talcum powder. Occasionally the powder can be omitted and olive oil used gently to bathe the skin surface. The whole dressing should be continuously heated by hot-water bottles so adjusted as to bear no weight upon the part. The temperature of the dressing should be evenly maintained at 110 degrees to 115 degrees, day and night. Once each twenty-four hours the dressing should be carefully removed and the membrane inspected.

Where ulceration of the skin has occurred over the site of the involved vein, hot bichloride of mercury fomentations should be applied, and these changed frequently and kept moist and hot. A week of this treatment will so antisepticize the area that the fomentations can be omitted, the area allowed to desiccate, and a dry dusting powder applied. The warm covering in these cases should be windowed over the area to be treated so that ready access to the ulcerated part is obtainable while the dry dressing as a whole is not disturbed. The dusting powders giving the best results are oxide of zinc, stearate of zinc (carefully pulverized and not allowed to cake), and subgallate of bismuth.

In *chronic* cases, if, when the patient lies down and the limb is elevated, careful digital milking will empty the tortuous channel, the case is amenable to a trial without operative procedure, for the time being at least. The patient is instructed to elevate the disrobed member at an angle of 45 degrees for from ten to thirty minutes daily. A properly outlined or close-fitting elastic or linen fiber stocking is to be worn continuously, except when the limb is elevated. The skin should be gently bathed thrice daily with an alcoholic solution, using a soft sponge, after which

it should be dried by fanning and talcum powder dusted over. The patient should improvise an inclined plane cradle, properly padded, in which the affected member may rest during the night. Often elevating the foot of the bed eighteen inches will serve the purpose well. To avoid discomfort of the upper body the upper half of the mattress can be propped up with padding or an extra pillow or two provided.

Chronic phlebitis is materially benefited by local alternate hot and cold sprays, douching, packs, or submersions. Either of these methods can be used, according to convenience, for they give like results. The submersion and spray combined are often the most convenient and are to be carried out as follows: Two tubs or pails are used, one containing water drawn from the cold-water tap (or, in hot weather, with a piece of ice added), and the other, water at 110 degrees. The affected limb is first submerged in the hot water and held there thirty seconds, then in the cold water for fifteen seconds. This alternating procedure is gone through ten times, ending with the cold-water submersion. The part is then gently rubbed until the skin is dry and red, showing proper reaction. Gentle stroke massage in the direction of venous flow is carried out for ten minutes, the skin dusted with talcum powder, and the member properly clothed after the elastic support has been applied.

Where it is not feasible to use the submersion method, spraying with sponges of hot and cold water, or a nozzle spray attachment, serves the purpose very well, applied for the same length of time. Even when the submersion method is used, the spray may be employed to supplement it by treating the upper parts that cannot be submerged. When none of these methods can be carried out, hot and cold packs for the same periods serve well. By such treatment the vasomotor system is greatly augmented and the musculature of the venous walls stimulated to action.

If the tortuous superficial veins are emptied to a greater or less degree by the treatment, one is fully justified in advising operative methods for complete relief.

When the abdominal-wall veins are involved, posture treatment for ten-minute periods thrice daily aids greatly. This can be done while the alternating thermic treatment is being applied, with the patient lying flat on the back and the hips slightly elevated, supported on a pillow. In these cases the skin should be dried by gently rubbing up on the right side of the abdomen, across the top just below the ribs, down on the left side, and then in a circle with the umbilicus as center.

THE EFFECT OF DIGITALIS ON THE BLOOD-PRESSURE AND PULSE-PRESSURE IN THE PRESENCE OF CARDIAC DECOMPENSATION.—According to Lawrence, *Boston Medical and Surgical Journal* of January 8, 1914:

1. The effects of various drugs on the blood-pressure, as determined by experiments on animals, do not furnish reliable criteria for the administration of such drugs to man, since the effect may be quite different in the latter.

2. The pressure-raising effect of digitalis noted in animals and in healthy individuals does not occur, as a rule, when the drug is administered to individuals suffering from cardiac decompensation.

3. The cause of the cardiac decompensation does not appear to affect the action of the drug.

4. Digitalis preparations may be safely administered to patients suffering from arteriosclerosis, angina pectoris, or nephritic hypertension, if cardiac decompensation is present; under such conditions it rarely causes a rise in blood-pressure.

OPHTHALMIA NEONATORUM WITH REPORT OF A TYPICAL CASE.—The author stated that the medium of contagion in ophthalmia neonatorum, the discharge from the vagina of the mother, was pointed out by Piringer in 1839, and that its true etiology was known only after the discovery of Neisser and the demonstration of the role of contact by F. Jaeger. He gave a brief account of the characteristics of the disease and outlined his method of treatment, which consisted in placing the patient in a hospital, if possible, under a competent oculist and nurse, the application of cold to the eye, cleansing it with boric acid or other solutions at frequent intervals, and the instillation of argyrol, which he had found better than other silver salts. Nitrate of silver in two per cent solution might be used on the everted lids once a day. This was the plan of treatment followed in his case, which he first saw on the eleventh day after birth. Perfect recovery resulted. He dwelt on the importance of prophylaxis by the Crede method and on the responsibility of the profession in this regard. The cardinal point in the treatment he regarded as the frequent and thorough cleansing of the eye of all pus, thereby lessening the danger of corneal ulcer.—Dr. C. F. Burkhardt, *Annals of Ophthalmol.*

WILLIAM SPENCER, M. D.

THE TREATMENT OF TOBACCO AMBLYOPIA WITH LECITHIN.—The author bases his treatment on the theory that the lecithins, and not water, act as solvents of the alpaloids, and carry them to the nerve cells, where the lipoids, in which the nerve cells are very rich, holds them fast. In the same way, by increasing the amount of lipoids in the blood, the desintoxication of the nervous system is affected, as confirmed by experience. Davis tried the method in four cases in the service of Gallemaerts; one chronic case gave an immediate good result; another case of a year's standing was not bettered; the third case showed considerable improvement after five injections, and the fourth case was very satisfactory. In the five cases of De Walle the results were very encouraging. One must not forget that the withdrawal of tobacco alone will often effect a cure in recent cases. In old cases a limit of progress was reached, corresponding, no doubt, to the amount of permanent nerve lesion, but even in these cases the results showed the benefit of persevering.

De Walle does not attribute much value to the routine exhibition of strychnia. Clin's oil preparation is injected every day intramuscularly, although the subcutaneous method may also be employed. The intramuscular injections cause a strong local reaction after several injections have been given, so that a pause of ten to fifteen days has to be made, and the reaction is less intense when the injections are resumed. Merck's suspension in physiologic liquid are better borne even in doses of 0.5.—Dr. De Walle, Ghent, *Arch. d'Ophthalmol.*

WILLIAM SPENCER, M. D.

SALVARSAN AND OCULAR SYPHILIS.—After expressing his firm opinion that salvarsan has not supplanted mercury in the treatment of syphilis, the author reports four cases as illustrating the extreme usefulness of salvarsan in producing a rapid subsidence of syphilitic disturbances in the eye. In three cases of plastic iritis very slight initial improvement, with subsequent increase of severity, had followed injections of gray oil and of benzoate of mercury. Within forty-eight hours after respective doses of 6.5 and 4 dg. of salvarsan intravenously, there was marked improvement and within three days atropin produced ample dilation of the pupil. The fourth case was one of gumma of the ciliary body accompanying florid general syphilis. The gumma increased considerably in size during a week of daily injections of biniodid of mercury, combined with emsol. After intravenous injection of 6 dg. of salvarsan there was astonishing rapid improvement of all the general symptoms, with simultaneous reduction in the size of the ocular gumma.—*Arch d'Ophthalmol.*, Dr. Leon Ortin.

WILLIAM SPENCER, M. D.

A RESUME OF PERSONAL EXPERIENCE WITH VACCINE. Based on two years' experience with private cases, Dr. Mann has previously made two reports with vaccines in phlyctenular keratitis, corneal ulcers, nonspecific iritis, choroiditis and penetrating wounds of the eyeball. His conclusions then were that a mixed vaccine of staphylococcus and streptococcus was of decided benefit, and at this time, three years' later, feels still more confidence in such vaccines in the diseases mentioned. In the diseases named, due to endogenous infection, it was hardly feasible to make an autogenous vaccine, but in some the offending germ could be obtained by paracentesis. Therefore the mixed vaccines were mostly used. In phlyctenular conjunctivitis improvement was rapid and there was seldom a return. In phlyctenular keratitis healing of the ulcer was hastened, but the most decided results were obtained in the chronic type. One injection was usually sufficient, with a second to assist the cure. In one case of tubercular type, improvement was not rapid nor permanent, but improvement was noted always after vaccine. Tuberculin in addition was advised. In episcleritis the inflammatory signs disappeared after one or two injections. In nonspecific iritis, if given in the early stage, pain is increased for twelve to eighteen hours, when improvement begins and shortening or abortion of the disease occurs. Choroiditis was treated in only a few instances. There was improvement in all cases of uveitis except one, which did not return after the first injection. Vitreous opacities and deposits on Descemet's membrane are not so much influenced. They are due to endogenous infection from a focus elsewhere in the body, as the intestines, nasal sinuses, mouth, vagina, gall bladder, etc., according to S. Mayou, staphylococcus is responsible for most cases. In cases in which tuberculosis was present improvement was not so rapid. The vaccine has been used as a prophylactic in traumatic operative cases, cataract in rheumatic patients and iritis. It does not always prevent cyclitis. The adult dose is thirty million streptococcus and 100 million each of staphylococcus albus and aureus. A smaller dose for women and a proportionate dose for children, given at three to five-day intervals, gradually increased. The

local reaction never goes on to suppuration, though it may be severe.—Dr. William A. Mann, *Annals of Ophthalmology*.

WILLIAM SPENCER, M. D.

TUBERCULAR MENINGITIS.—Thanks to the electric ophthalmoscope, examination of the fundus—particularly in babies with this disease—is very easy, in five minutes or less. A weak solution of atropin is always instilled. Yet even then Marple's figures were five per cent or less until, in 1912, he instituted frequent examination by the house physician as well as by the author and his assistant. In the Baby's Hospital (New York) every case is now examined several times a day until tubercle is discovered in the fundus. Of thirteen consecutive cases the examination was positive in all—100 per cent—confirming Carter & Stephenson's surmise that frequent examinations would make the percentage higher than 50 per cent. The ophthalmoscope is a valuable diagnostic aid even in these days of lumbar puncture. In four cases this ophthalmoscope diagnosis was made before the laboratory report was received, and in one case when the latter was negative. In not one instance did the author find exudate on Descemet's membrane in cases of tubercular meningitis with tubercles of the choroid.—W. R. Marple, *The Ophthalmoscope*.

WILLIAM SPENCER, M. D.

THE DIAGNOSIS OF ALBUMINURIA DURING PREGNANCY.—Whether albuminuria in a pregnant woman is due to a chronic nephritis or to a toxæmia of pregnancy, may, according to Williamson, be determined by determining acidosis. Acidosis is constantly present in the toxæmia of pregnancy when the changes have reached a certain grade. It is not found in the cases of chronic nephritis. If in the course of chronic nephritis acidosis appear, a newly occurring combination of toxæmia and chronic nephritis exists. In the early stages of toxæmia the demonstration of acidosis may not be possible, since it appears later than the first symptoms. Acidosis may be demonstrated by the decreased alkalinity of the blood, an increase of the ammonia coefficient, a decrease in urea, and demonstration of acetone, oxybutyric acid and diacetic acid in the urine. The presence of the latter and of acetone shows that fat metamorphosis is disturbed by liver changes.

The clinical requirements are that in toxæmia chloroform must not be used on account of possible injury to the liver, nor calomel or sublimate administered because of the same reason. The acidosis may be treated by intravenous administration of sodium bicarbonate or acetate. In order to influence the fat metamorphosis glucose may be given per rectum or lemonade per os. A pregnancy complicated with chronic nephritis when acidosis sets in, should be terminated.—*Obstr. Zentralbl. f. Gyn.*, 1913-1275.

THEODORE J. GRAMM, M. D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

SOME MEDICAL CONCESSIONS.—Professor Richard C. Cabot, of Harvard Medical School, concedes: That tuberculin in tuberculosis is homoeopathic; that bacterial vaccines are homoeopathic in principle; that the small dose of these is homoeopathic; that radiotherapeutics is a striking example of the "homoeopathic principle"; that the approach to the single remedy is homoeopathic; that "regular physicians" are wrong in not experimenting with homoeopathic remedies.

Professor Von Behring, of antitoxin fame, concedes: That the word homoeopathy expresses best the ideas of immunity and vaccine treatment.

Professor Huchard, of Ecole de Medicine, Paris, concedes: That homoeopathy has many truths, both in application and in dosage.

Professor Gimeno, of the medical faculty of the University of Madrid, concedes: That Hahnemann's law of similars is scientific and sound.

These concessions coming from those high in authority from the older school, should induce every physician of that school to lay aside prejudice, acquired or inherited, and look into homoeopathy, which can be best done in studying the publications of the homoeopathic school.—*Pacif. Coast J. of Hom.*

THEORY OF HOMOEOPATHIC DOSES.—It was once said of the Duke of Wellington "that he spoke French with intrepidity." Preserving the metaphor it may also be stated that the late Dr. Adolphus Lippe practised homoeopathy on this same principle. Among the manuscripts left by him is one, however, in no way polemical but sensing just the same a remarkably clear exposition of the truths of homoeopathic practice. It is from the pen of one Isaac Colby M. D., and published by Otis Clapp, of Boston, bearing date of 1846. It is so well done and so "modern" that it would be a pity to abridge it. Following is the substance of this tract.

Life may be denominated that immaterial principle, or dynamic power, which presides over vital organization, adapting it to the purposes of animal existence and health, an easy, natural performance of all the functions of life. And as our material existence is the controlling power, it is evident that disease is, primarily, an affection of that power, modifying its mode of action and feeling, and in this way de-

ranging the harmony of vitality, and producing a class of symptoms which we call disease. And consequent upon this, there may or may not follow a derangement of the physical organization—a swelling induration, or wasting. It is the province of homoeopathic medicine to obliterate these symptoms, in a natural, easy, and durable manner, without prostrating the powers of life, or in any way interfering with the functions yet unassailed by disease.

To accomplish this, the first object of the physician is, thoroughly to investigate the case, and get a perfect picture of all the symptoms fully impressed upon his mind; and then to select a remedy, the totality of whose symptoms has been found, when administered to a healthy individual, to bear the nearest resemblance to those of the disease. Every true medicine, in its adaptedness to the physical laws of the animal economy, has specific functions over which in its milder operations, it exerts a control in preference to all others, but, when taken in larger doses, it is not restricted by its primitive affinities, but overwhelms the whole vital organization in a general tumultuous action. When any considerable impression is made on animal life, it quietly yields itself, for a time, to the impression, and afterward an effort at reaction follows, proportionate to the impression that has been made. If I plunge my hand in ice-water for a moment, a healthy glow is all I feel, but if it remains there a much longer time, a most painful reaction will be the result. If I take a powerful stimulant, as ardent spirit, the subsequent depression will be in proportion to the previous excitement. Or if I produce an unnatural impression of any kind, I have interrupted the vital economy, and excited the irritability of the nervous system, which always reacts upon the disturbing influence in an opposite direction. And the amount and character of this reaction is beyond my control. This is true of the impressions made by medicines in the ordinary doses. If the medicine is rightly chosen, a certain amount only is necessary to meet the symptoms of the disease, and all that is given over, causes but a destructive waste of the powers of life. And here we have the great stumbling block of homoeopathic medicine—its doses.

And truly at first thought, it does seem incompatible with common sense, and a belief in it a just subject of ridicule, so wisely different are they from the doses we have been accustomed to. And some of the noblest sciences too, in their infancy, encountered the same opposition that homoeopathy now does, because so different from all previous experience and theories. But the opposers of homoeopathy are either those who have had no opportunity to examine its claims, or those who have deliberately closed their eyes against the science itself, and against all facts that go to sustain it. Common observation proves that medicines have a greater affinity with the powers of life, than the noxious principles or miasms have, because the former act with certainty, while the latter but occasionally affect those exposed to their influence. If a person take a dose of medicine, he knows it will make an impression on his vitality; but if he be exposed to contagion, the powers of life resist its effects, and it is more doubtful what will be the result. Medicines, therefore have a nearer relation to the vital

principle than the noxious agents have, and when given with strict regard to the similarity of their pathogenetic symptoms, (symptoms on a healthy person), to the symptoms of the disease, it requires but a very minute dose to take possession of the vital organization and displace the disease. This is the philosophy of homoeopathic doses. As it is the object of homoeopathic medicine to neutralize the symptoms of disease, it selects its remedy with that object only in view; and there must be a similarity of the symptoms of the medicine, ascertained by experiments on healthy individuals, to those of the disease—and the more exact this is, the more perfect will be the cure. The dose is then so arranged in quantity, as just to meet the symptoms and displace them, without expending its energies in prostrating or deranging the powers of life. But it often happens that there is no one medicine yet discovered, whose pathogenetic symptoms form a perfect picture of those of the disease. The medicine then the nearest to it, and which meets the most important symptoms, must be taken first. And when these symptoms are annihilated, another must be selected to meet other symptoms. And when all the symptoms are gone, it is a truth self-evident, that the disease cannot remain.

In every curable case, the first dose of the appropriate medicine will be sure to make an impression upon the vitality of the part diseased, which, if not interrupted by too frequent repetitions, nor counteracted by other medicinal substances in the form of diet, etc., will continue its operation a longer or a shorter time, according as the disease is in a passive or active state. In a passive state the effect of this impression is, to obliterate the disease, and then the vital energies come into play, and restore a healthy action. Sometimes one dose is sufficient to obtain a complete victory over a disease of long standing. It establishes its control, and the condition essential to disease ceases, but it may require several weeks for the full establishment of health. And some of the homoeopathic medicines continue their operation without being repeated, that length of time. But in acute diseases it is different. The vitality being assailed with so much more energy, the impression of the medicine, instead of neutralizing the symptoms, is soon itself overcome, and must be often repeated till it fully establishes its influence.

Homoeopathic medicines, following the analogy of nature, are all specifics; a definite object with a definite agent, whose effect is directed solely to the labor it has to perform, with power only for its accomplishment. But, laying aside the idea of specific, and adopting the alloepathic practice of opposites,—a person has pain—its opposite (opium) is given—the pain is not subdued, but stifled by stupor, and will break out again with renewed violence, whenever the effect of opium is over, and will require augmented doses at every subsequent return. Homoeopathy, on the contrary, selects a medicine of like symptoms, (that is, capable of producing the same pain), and its affinity to the vital organism directs it to the part affected; and the dose being so reduced that its simple primitive operation only is produced, the pain is annihilated instead of concealed, and the cure perfect. If there be costiveness, and evacuations are forced by medicines of opposite symp-

toms (cathartics), they have no tendency to cure the habit; but the medicine must be repeated in increasing doses, and a more inveterate condition of the disease is the consequence. Or, if there be diarrhea, the treatment is only to be reversed, and the result is the same. But in these cases, homoeopathy chooses medicines having like symptoms with those it is to cure, in doses barely sufficient to neutralize the disease, without making any other impression, and the cure is natural and perfect.

SOME CHARACTERISTICS. *Ruta.* Rectal prolapsus every time an attempt is made to go to stool. Rectal prolapsus from the slightest costiveness and also subsequent to accouchment.

Veratrum album. Constipation, stools hard and voluminous. The rectum seems inert, the forehead is covered with a cold sweat, during the efforts of defecation.

Berberis. Anal fistula with tinglings in the involved area particularly when the patient coughs.—*L'Homoeopathie Francaise.* *Leon Vannier* (*directeur*).

PHYSIOLOGICAL DYNAMIZATION. Under a very instructive article dealing with this subject Dr. Allendy, in an issue of *L'Homoeopathie Francaise* comes to the following correct conclusions. (1.) The organism tends spontaneously to *dynamise* the substances which it absorbs. (2.) This *physiological dynamisation* actually produces the secondary effects of a therapeusis, the effect of habituation (l'account-umance is a fair cognate) and even an anaphylaxis under certain conditions. (3.) Artificial dynamization, according to our French confrere, presents the following advantages:

(a). It at once permits, and in a direct manner the effect of secondary action, without a harsh incommoding or brutalizing action of a primary effect.

(b). It is in many cases more complete, more efficacious even than physiological dynamization.

(c). It acts on the same law as the latter, which is to say that it imitates and abets the laws governing bodily action.

Antimonium crudum. He is much concerned about his fate. Disposition to grow fat. Inflammation of the muscles. Aversion to be looked at, and to be touched. Horn-like excrescences and dispositions to abnormal organisations of the skin. Gastric symptoms, worse in the afternoon and at night. When the symptoms reappear they change their locality, or go from one side of the body to the other. Aggravation from drinking sour wine, in the heat of the sun, after eating (pork), at night, or after bathing. Amelioration during the rest and in the open air.—*Manuscripts of Adolphus von Lippe.*

Angustura. Tetanic spasms, caused by contact, noise and the drinking of luke-warm water. Cheeks and lips become blue. The breathing is heavy and during the spasms there is groaning and closing of the eyes. Twitching and jerking along the back like electric shocks. Spasmodic twitching. He bends himself backward. Stiffness and stretch-

ing of the limbs. Cracking of the joints. Weakness of the whole body as if the marrow of the bones was stiff. Caries, very painful ulcers which affect the bone and extend into the marrow of it. Aggravation from touching the affected part.—*Manuscripts of Adolphus von Lippe.*

Conium Maculatum. Ailments and weakness of old men (eccymosis). Obscuration of the cornea. Swelling and induration of the glands, with stinging and tingling, after bruises and contusions. Hysterical and hypochondriacal attacks after excessive sexual indulgence or after entire abstinence. Great sensation of debility in the morning in bed. Induration after contusions and bruises. Paralysis and apoplexy of old persons. Convulsive twitchings of the limbs. Aggravation in the night, while eating, from the light, from drinking milk, on rising from a seat, in snow air. Amelioration while fasting, in the dark, from letting the limbs hang down, from motion (walking), from pressure.—*Manuscripts of Adolphus von Lippe.*

Corallium rubrum. Congestion of the blood to the face (after dinner). Profuse secretion of mucus through the posterior nares, obliging one to hawk frequently.—*Manuscripts of Adolphus von Lippe.*

Camphora. Diminished circulation of the blood, to parts most distant from the heart (coldness of the external body). Color of the face bluish. Sudden sinking of the strength. Pains as if bruised in the inner parts. Great sensitiveness to cold and cold air. Loss of sensation. Cracking of the joints. Rheumatic stitches in the muscles. Most symptoms appear during motions and at night, are aggravated by contact, cold air and when thinking of them. Amelioration from warmth. Asiatic cholera.—*Manuscripts of Adolphus von Lippe.*

DEATH OF WILLIAM, PRINCE OF LIPPE.—During the recent German war, William, Prince of Lippe, was killed at the siege of Liege. He was a relation of Dr. Adolphus von Lippe, who gave over his claim to the title by migrating to the United States and accepting American citizenship, of which he was very proud. Recent disclosures in the public press have occupied space recently bearing upon the claim put forward by William A. Lippe, a son of the doctor's, who recently died in this city. It may be of interest to state that Dr. Adolphus Lippe's brother was Imperial Secretary of State for Germany, just prior to the tenure of that office by Bismarck. Dr. Lippe was a cousin of the present Emperor of Germany and a blood relation to the late Queen Victoria.

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HEART DISEASES IN CHILDHOOD.

BY

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(Read before the American Institute of Homoeopathy, Atlantic City, N. J.,
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ACQUIRED heart disease in childhood in the majority of instances results from rheumatic endocarditis. Owing to the prevalence of rheumatism among children this important condition is by no means rare. Of especial interest to us as clinicians is the prevention of heart complications so far as that is possible in children of the rheumatic diathesis and an appreciation of the prognosis which involvement of the heart presents to the future welfare of the child.

The etiology of rheumatism is still one of the puzzles confronting the pathologist. The resemblance between the symptoms and pathological findings in rheumatic fever and those of the various infectious diseases has long led to the belief that it is due to infection with an unknown micro-organism. Sahli in 1893, expressed the opinion that it was an infection due to the action of attenuated pyogenic cocci. Poynton and Payne later isolated a micrococcus from the heart and joints of rheumatic cases and they called this organism the *diplococcus rheumaticus*. In 1900 they produced the lesions of rheumatic fever in rabbits by subcutaneous inoculations with a *diplococcus* isolated from a case of rheumatic angina. (Poynton, *The Practice of Pediatrics*, Carr.)

Other investigators have verified these findings but have

also shown that the diplococcus may appear as a micrococcus or streptococcus in culture. In a number of instances a streptococcus with hemolytic properties has been found.

The site for the entrance of the infection appears to be the tonsil although this is not invariably the case. A close relationship between an infection involving the tonsils and endocarditis no doubt exists and endocarditis has been observed to follow attacks of tonsillitis. I have recently seen three successive cases of "sore throat" occurring in occupants of the same house in each of which arthritis and endocarditis followed. In one case a petechial rash developed.

Other infectious diseases that are at times complicated with endocarditis are scarlet fever, influenza, pneumonia, gonorrhoea and diphtheria. In the last named disease myocarditis is by far more frequent than endocarditis and the diagnosis of endocarditis should not be made unreservedly because of the presence of a murmur.

An important fact to bear in mind in connection with the pathology of rheumatic heart disease in childhood is the following. The earlier in life the rheumatic infection occurs the greater the tendency to a general involvement of the heart. The lesion therefore is not as a rule a simple endocarditis but myocarditis and peri-carditis are frequently associated. The last of these leading to adherent peri-carditis, produces more than any other early heart failure, since it imposes the greatest strain of all upon the heart. (Hirschfelder, Diseases of the Heart and Aorta.)

Symptoms of endocarditis. An irregular continued fever in childhood, at times hardly perceptible, often disappearing after rest in bed and accompanied by malaise, pallor and moderate anemia should always arouse the suspicion of a rheumatic infection. In the absence of active throat manifestations or of joint involvement this febrile disturbance should at once lead us to suspect the presence of a low grade endocarditis. Tuberculosis, of course, must be excluded as a possible cause for such a rise of temperature. At the onset of endocarditis repeated examination of the heart will reveal a weakening and blurring of the first sound at the apex with the gradual development of a blowing murmur. With the establishment of the murmur the area of deep cardiac dullness increases and the pulmonary second sound becomes accentuated.

ated. These signs are found in the great majority of cases because the mitral valve is the one most frequently attacked by rheumatic endocarditis and a mitral insufficiency is the commonest lesion resulting therefrom. In the early stages the murmur may be heard more distinctly just over the area of the auriculo ventricular orifice than at the apex, and owing to the adaptability of the child's heart to any extra strain the pulmonary second sound may remain unaltered for some time. The murmur just described may also occur in diphtheria and I have encountered the same condition in scarlet fever, as a result of dilatation of the auriculo ventricular ring from myocardial weakness. Under these conditions it becomes a temporary disturbance.

Mitral stenosis may develop in conjunction with insufficiency or exist alone. The first physical signs to be noted are a faint murmur occurring in early diastole. The cause of this murmur is the flow of the blood current over the roughened edges of the auriculo ventricular orifice during the early part of diastole. Later, as contraction and distortion of the orifice develops the auricle is called upon to force the blood through the stenosed orifice, and as a result of this exaggerated auricular contraction in late diastole we now hear the loud rumbling presystolic murmur accompanied by a palpable thrill, a sharp snapping first sound and usually reduplication of the second sound. The last results from the high tension in the pulmonary artery.

Aortic disease is rare in childhood and is indicative of a severe progressive type of endocarditis. I have never seen it alone, it is generally a terminal event in a progressive or in a malignant endocarditis. At first a systolic murmur over the aortic area transmitted into the carotid and accompanied by a weakening of the aortic second sound is heard. The cardiac enlargement progresses and the patient's discomfort is much increased. This is followed by throbbing carotids, collapsing pulse and total obliteration of the aortic second sound showing that the valves have become incompetent. In the general cardiac turmoil an aortic diastolic sound is difficult to detect and this is unnecessary for the diagnosis. The case has now assumed such a serious aspect that the designation of "general carditis" fulfils all clinical requirements.

The severe acute cases of endocarditis which one is apt to see in consultation often present a history like the following:

A child from five to ten years is attacked with sore throat followed by arthritic manifestations of moderate severity. There is slight fever. Suddenly the temperature rises, the patient complains of pain in the cardiac region and epigastrium; there is cough and shortness of breath. Examination of the heart reveals increase in the area of cardiac dulness, a loud murmur at the apex and possibly friction sounds near the sternum. Circulatory failure progresses until a fatal termination sets in. The duration of the entire illness may be but a few weeks.

More common, however, is the recurring form, and this furnishes the cases we see most frequently in the hospital wards. The child is brought to the hospital for an attack of rheumatism, chorea, or for shortness of breath, and an old valvular lesion is discovered. Inquiry into the past history of the case discloses the fact that the child has had a previous attack of rheumatism or chorea, or perhaps such vague symptoms as sore throat and growing pains. The rheumatism or chorea subsides, but the fever continues, due to the presence of endocarditis. After several weeks in bed the process subsides, the heart muscle regains its tone and the breathing and pulse improve. The child is now dismissed from the hospital, but we anticipate his return in the near future in a worse condition than on the previous admission. Fully half of these cases succumb to their malady before puberty.

Prognosis. The literature upon heart disease in childhood agrees more or less in giving to the prognosis an unfavorable aspect. It is, however, difficult to get a clear conception of this important question because of the lack of definite statements that are to be found. The statistics given by Dunn (*American Journal. Diseases of Childhood*, August, 1913), have furnished much valuable evidence in this direction.

In the first place, according to Dunn's figures, the ultimate disability following rheumatic heart disease acquired in early childhood is not nearly so great as that following endocarditis occurring in late childhood. Thus, out of a series of 88 cases in young adults with evidence of former endocarditis only two showed great disability and in these the attack occurred in the twelfth and thirteenth year. The younger the child, therefore, when the endocarditis occurs, the better the chance for the future as far as permanent after effects are concerned. Compensation is established not only by means of a mechan-

ical hypertrophy of the heart but also through mutual adaptation between the heart and the organism.

These figures, however, should not lead us to forget the real and more important side of the question, namely, that it is only the mild, non-recurring cases that live beyond puberty and make up this class of young adults with a non-serious, well compensated valvular lesion. The *immediate mortality* out of a series of 261 of Dunn's cases was 20 per cent. Out of the remaining 209 cases 50 per cent. died during the subsequent ten years.

From these figures, then, it may be seen that the majority of children attacked with endocarditis do not live beyond puberty. One of the chief reasons for this unfortunate outcome is the liability to recurrence which is so strong in rheumatic fever, being noted in fully 80 per cent. of cases. With these recurrences increase in the existing danger to the heart occurs. Another factor, already mentioned, is the tendency to a general carditis, the process not remaining limited to the lining of the heart as in the adult. We must also take into consideration the unusual demands made upon the heart of the young growing organism in order to maintain an adequate circulation of the blood.

Even in spite of these demands and in the presence of a badly damaged valve, the child's heart seldom fails and heart failure in childhood usually results from an acute process or from an acute exacerbation of an old condition. During such an attack, fever, cough, shortness of breath and pain are the prominent symptoms and the child often dies before oedema of the extremities and enlargement of the liver develop. *Reinfection and not strain*, as in the case of adults, leads to the final breakdown. It is perhaps chiefly for this reason that remedial measures that so frequently relieve the symptoms of decompensation in the adult are futile in these crises in childhood.

The worst prognosis may be anticipated when pericarditis occurs as a complication. A progressive asystole, rebellious to any form of treatment, may be looked upon as the chief clinical symptom of an adherent pericardium. (Apert, *Maladies des Enfants.*) Acute pericarditis with effusion gives a high immediate mortality (31 per cent. Dunn). An adherent pericardium leads to progressive heart failure; ascites and

anasarca may become prominent features and the case may assume the clinical type of pseudo-cirrhosis of the liver.

To recapitulate, the child's heart if not too seriously involved and if not handicapped by recurring infections may hypertrophy in a most favorable manner and adapt itself to a valvular defect; in fact, "the entire organism adapts itself to the new condition arising in the circulatory apparatus" (Feer, *Kinderheilkunde*). Unfortunately this occurs in the minority of instances. We occasionally meet such cases in our practice and follow them through puberty to early adult life, but always with misgivings.

A fortunate circumstance in connection with rheumatic fever is that after adult life is reached there is less tendency to endocarditis than in childhood.

The chief reasons for the unfavorable outlook in rheumatic heart disease in childhood is the tendency to recur and the frequency with which myocarditis and pericarditis are associated with the endocarditis.

Cardiac insufficiency in children results from infection or reinfection and not from strain as does the ruptured compensation in adults. The particular valve involved is of no special prognostic significance.

Involvement of the aortic valves is grave, for the reason that they are practically never affected alone but only in conjunction with the mitral valve in the more violent types of endocarditis. Many of these cases assume the type of "septic endocarditis."

Diagnosis. Cases of valvular heart disease may exist for a long time unrecognized and be first discovered during a routine examination of the chest. This is especially so when the endocarditis has developed insidiously during an attack of chorea or in conjunction with mild, atypical attacks of rheumatism. These children are brought to the clinic for vague symptoms such as pallor, listlessness, poor appetite, shortness of breath, and loss of weight. Often they run a slight temperature suggestive of tuberculosis. Endocarditis may be the primary manifestations of the rheumatic cycle, arthritic manifestations and chorea appearing later on. .

Again, a child may be brought to the physician on account of pain referred to the epigastric region, and the examination reveal a pericarditis. From these facts the importance of routine examination of the heart becomes apparent.

A murmur alone is not sufficient evidence upon which to make the diagnosis of endocarditis. One must demonstrate the presence of enlargement of the heart as well. In fact, in acute myocarditis of diphtheria and pneumonia, and in the dilatation of whooping-cough, increase in the area of deep cardiac dullness together with a systolic apical murmur is frequently encountered. These physical signs, however, are only of temporary duration and if the heart regains its normal vigor and tonus they disappear.

A murmur at the aortic area rarely occurs independently of mitral disease and it is usually diastolic or double. An uncomplicated systolic murmur at the aorta is suggestive of congenital heart disease. (Still, *Common Disorders of Childhood*.)

Accidental murmurs are rare in infancy but not uncommon in childhood. They occur either as a so-called functional murmur over the pulmonary area in acute febrile disturbances and anemic states or at the apex at the end of inspiration. The name cardio-pulmonary murmur has been given to the latter condition; it is most frequently heard in a vigorous, overactive heart. A constant murmur found in a child under three years old, especially if it be heard most distinctly at the base, may be looked upon as congenital.

Still (*loc. cit.*) describes a murmur which he calls "physiological bruit," occasionally heard in young children, between two and six years old. It is usually heard just below the level of the nipple, about midway between the left margin of the sternum and nipple line. In time it is systolic and it is not transmitted. The character is twanging, somewhat musical, very like the noise made by twanging a piece of tense string.

Adherent pericardium is difficult to diagnose. Apert (*loc. cit.*) maintains that the only definite physical sign upon which a positive opinion can be based is the invariability of the situation of the heart in diverse bodily positions of the patient. This is demonstrated by noting the position of the apex beat and deep cardiac dullness with the patient standing, recumbent and lying on the right side. The chief clinical symptom in his belief is progressive asystole rebellion to any form of treatment. Personally I am of the opinion that systolic retraction of the chest wall in the cardiac region if properly interpreted is a diagnostic sign of great value, as is also a heaving, diffuse impulse associated with diastolic shock and

diastolic collapse of the jugular veins. In a heart that is not markedly enlarged these signs are even of greater significance.

Treatment. The treatment of heart disease resolves itself into prophylaxis, care during an acute attack or during an exacerbation of an old endocarditis and the care of the child during periods of quiescence.

The chief prophylactic measure in the present state of our knowledge of rheumatic infection is attention to the throat. All colds in the head should receive prompt attention; adenoids and diseased or abnormal tonsils should be removed. Attacks of laryngitis and bronchitis, especially if recurring in nature, should be viewed with suspicion.

The diet should be generous and nourishing and largely lacto-vegetarian, although meat is not contraindicated. Owing to the tendency to anemia, eggs and meat must enter into the diet with moderation. Fats are of the greatest importance and in the winter time cod liver oil should be given.

Cold baths are not well tolerated by rheumatic subjects and a damp chilly climate is a disadvantage to these cases, although clear cold weather is beneficial. The clothing should be of wool throughout in cold weather. Exposure to others suffering with colds and sore throat is to be strictly avoided.

During an attack of endocarditis absolute rest in bed must be enforced until the pulse and temperature have been normal for two or three weeks. There is less danger of the patient becoming weak from lack of exercise than there is of straining a weakened heart muscle and relighting the endocarditis. General massage may be employed during the period of convalescence.

At the end of this period also, if the heart remains enlarged and shows deficient tonicity and the peripheral circulation is poor, the Nauheim baths and resisted movements may be employed to great advantage.

Aconite is the best remedy in the early stages when the inflammatory process is at its height and the pulse is rapid and the patient nervous and restless. Chilliness, palpitation, stitches about the heart, praecordial distress and anxiety are keynotes for this remedy.

Bryonia is pre-eminently indicated in pericarditis but its specific affinity for serous membranes also makes it valuable in endocarditis. When the patient is weak and indifferent, with

continued fever, headache, great thirst, general rheumatic aching and soreness in the cardiac region, bryonia is the remedy indicated. In endocarditis and pericarditis with violent palpitation and stitching pains about the heart *Spigelia* is indicated.

In myocarditis *Arsenicum Alb.*, *Cactus* and *Digitalis* are to be considered. When decompensation occurs we may have to depend upon the physiological effects of digitalis to tide the patient over the crisis. *Convallaria* is a remedy which should also be considered in this condition, especially when the pulse is rapid and irregular and the patient is conscious of the disturbed heart's action.

After the acute manifestations have subsided, the *Iodide of Arsenic* 3x trit. administered for several weeks often improves the child's general condition and cardiac action markedly. *Ferrum phos.* may also be of value if there is a secondary anemia with shortness of breath on exertion and *Kali Carb.* when there is a slight oedema of the ankles at the close of the day.

For general rheumatic disturbances *Rhus. Tox.* is most frequently indicated. The recurring rheumatic sore throat suggests *Guaiacum*. An occasional dose of *Sulphur* may be administered where chronic arthritic or cutaneous manifestations are noted.

THE STATUS OF THE HUNGER PAIN IN GASTRIC DISEASE.

BY

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THE enormous weight of diagnostic import that has been placed upon the symptom of hunger pain, or the late appearing pain with its onset some hours after a meal, or waking the patient at night, which pain is relieved shortly after the ingestion of food or alkalis, has led the profession at large to narrow the diagnostic import of this symptom within the field made famous by its renowned discoverer, Moynihan. Hunger pain and duodenal ulcer are now thought of in unison and succession.

It is certainly a wonderful tribute to this observer that his descriptive powers have effaced any other place in medicine

for this evidence of disease, save in the symptom complex, so intimately associated with his name.

It is, however, to present the broader sphere of this symptom and to establish its position in other pathological states that the writer desires to draw attention, as well as to establish its causal factor in a different sphere than that usually outlined.

Moynihan, himself, in the second edition of his work "Duodenal Ulcer," page 146, bewails the fact that the profession has narrowed his discovery down into a position far too restricted. He said that when he first introduced the term "hunger pain" he did it in a specific sense but failed to make his specific position clear. In all I have written since, I have used this term in a very strict and specific sense. The only inference to be drawn from the text is, that the symptom "hunger pain" must be amplified by other symptoms of the disease to make the diagnosis justifiable. With it all, however, we of the profession are prone to consider it only in its one light and many a hasty diagnosis has resulted from this one symptom.

The most common sources of error are: First—ulcer of the lesser curvature which has involved the pancreas by actual involvement, or by irritation. Secondly—malignant disease of the stomach and Thirdly—Achyilia gastrica. Fourthly—neurasthenia and lastly—the scar of a healed ulcer.

Some consideration of the hypotheses of the causal factors of the appearance of hunger pain will not be amiss in our discussion. Dr. Hertz, of London, in a paper entitled "The Sensibility of the Alimentary Canal" in substance, places its causation to the fact that the presence of free HCl, the irritant, is late in its appearance in the site of the ulcer lower down in the duodenum, as it is only after all the hydrochloric acid is united with the food that free acid can occur to irritate the ulcer. It is known that the acid is formed in the proximal two-thirds of the stomach and as the mixing powers of the fundus are small, as compared with the more active pyloric portion, the free acid lays on the portion of the organ where it is secreted and thus irritates an ulcer near the cardia earlier, and thus the earlier *pain* in this type of ulcer.

James Taft Pilcher, in a paper entitled "The Cause and Relief of Pain in Duodenal Ulcer" published in the Long Island Medical Journal, after a long series of experiments on dogs, arrives at the following conclusions: First—that ulcer

of the duodenum excites reflexly a hyperacidity of the gastric juice. Second—this maximum amount of secretion is due to a hormone and is at its height four hours after meals. Third—it passes into the duodenum as free Hcl, there being no food for it to combine with, and, Fourth—it does not excite a flow of duodenal juice directly, and is not neutralized by the small amount present.

The relief of pain of a duodenal ulcer following the ingestion of food in the stomach is due to a reflex flow of duodenal juice thus neutralizing the excessive acidity.

These are the views to explain the phenomena offered in duodenal ulcer, but the hypotheses will not hold water in the other type of disease where we have proved the symptom to be present.

The only symptom complex in the mind of the author, that will cover all the various states, is a spasm of the stomach or duodenum as the causal factor of the pain, and it is his desire, in view of the cases presented, to so put himself on record. In support of this theory of the causation of the pain, it is on this basis that T. Meunier, in an article in the *Presse Medical* of October, 1913, presents a series of minute erosion of the pylorus, similar to fissure of the anus, which also gave rise to the hunger pain and were cured by the stretching of the pylorus, similar to rectal divulsion. *Ent.* Jan., 1913, page 36.

It is my desire to present one each of various classes of cases cited with brief histories. Each case is representative of a type of disease presenting the tardy gastric pain relieved by eating. The radiographs of each will be presented to corroborate the author's views of the causal factor, and the reason of relief of pain on the taking of food.

The first case of the series represents type one. Its history—a young woman 22, single. Painful indigestion one year in duration, occurring in attacks. Burning, with crampy pain in a small spot going through to the back in the median line. The taking of milk gives entire relief. Nausea without vomiting was her other prominent symptom. The radiograph shows the spasmodic indenture or incisure which is a most characteristic radiographic sign of ulcer. This is most apparent in her slide and is present at one inch from the pylorus, an ulcer justopyloric, but within the stomach was diagnosed and at the operation this was verified. At a number of exam-

inations of the gastric contents, the total acidity proved to be 32 in place of the normal of 60 and the free Hcl was 12 in place of the normal of 25 to 35. Therefore, it was not the free Hcl in this case that caused the pain and the former theories expounded will not cover the etiology of the pain, but spasm will, and the spasm is most evident in the radiograph.

This case represents just one of a type, and if more were desired as proofs they could be presented in detailed history. The conclusion is, that justopyloric ulcers give rise to the hunger pain and that an ulcer within the stomach has relief of pain on ingestion of food, as well as that beyond the sphincter.

These histories are but briefly summarized and only enough is presented to substantiate my contentions. I have the full histories and more can be reported if it is desired.

The history of the second class reads as follows: Man 28 years—married—clerk—pain in the epigastrium wakes him up at 4 A. M.—sharp stabbing pain extends through to the back in the median line, not under the shoulder blades. Eased within one half hour after taking food. Location of the pain in a small spot two inches above the navel in the median line. Pain at times also comes on in the day time, two hours after meal and is eased by taking food. Other symptoms: Some pressure one hour after the meal, constipation. Did ever a more perfect picture of an ulcer present itself in the clinical history? Duration of complaint—over a year and it has been intermittent in character. In order to study his radiograph, a normal duodenal cap must be seen and become familiar with, and in considering this case, the deformity of the cap is evident and repeated analysis of the gastric contents reveals them to be entirely devoid of free Hcl and the ferments are not detectable and a complete case of Achylia Gastrica presents itself with a spasm of the duodenum, secondary to a diseased appendix. It was not an ulcer or increased hydrochloric acid could not cause any distress from the irritation of the free acid, and the resultant explanation is, that the spasm caused the pain and this spasm was relaxed by the taking of food which, giving rise to normal movements of the stomach, stopped the pain by stopping the spasm.

Atropine will allay spasm of the intestinal tract and stomach and in these cases it relieved, but, as our critics will say that it also reduced the amount of gastric juice to irritate, that

that was the means of relief, so we will not put too much stress on this proof. Atropine will allay spasm in a far more effective and speedy manner than it will allay excessive secretion. One or two doses will allay a spasm, but it necessitates continued use over a long period to make much effect on an excessive secretion.

Then this is class two of Hunger Pain lacking an ulcer as causal factor, which is Achylia Gastrica with a spasm and hunger pain.

Lockwood in "Diseases of the Stomach," says, on page 496, in considering Achylia, "the patient complains that about one hour after he takes his food he is annoyed by a burning sensation in the stomach, relieved by the taking of alkalies or by eating," and his description is the same as that given by those whose gastric contents are excessively acid, so that there is no way by which a differential diagnosis may be made except by means of the stomach tube. This is a very substantial corroboration.

Accepting the views presented in gastric ulcer, we are prepared, after the consideration of two facts, to accept the next proposition. The facts are: First—gastric ulcers frequently, gradually undergo a transition into gastric cancer, and, Secondly—that, despite the wonderful diagnostic machinery and expert pathological examinations in some of our modern surgical factories, it is impossible to accurately state whether, after a stomach is opened or even at the autopsy table, if a case is malignant or benign.

Therefore, we are prepared to accept the statement that gastric cancer will, under certain circumstances, give rise to the hunger pain and its relief by taking food and alkalies. You can readily conceive of a smaller nodular growth in a position near the pylorus, giving rise to a spasm similar to that shown in the ulcer. This mostly within the stomach, for malignancy in the duodenum is not a common condition.

Lastly, we all recall the numerous cases of typical hunger pain in our neurasthenics and realizing that practically all of these cases are resultant upon ptosis and atonic organs with a secondary spastic colitis and autotoxemia. I feel that few will take exception with me that it is caused by a motor spasm or disturbance in the duodenum, secondary to the causal factors enumerated. We can feel sure that the hunger pain

is quite as frequently presented by the neurasthenic as any other type of patient.

And, finally, one last thought, I am convinced that the scar tissue resultant upon a healed ulcer can give rise to motor spasm which will present hunger pain, and I have one case in mind of a stomach with an ulcer which, I feel, has been healed over a year. My conclusion in reference to the healing is based on repeated examinations of the stool for occult blood which have proved negative as well as a negative string test. A lack of evidence of hypersecretion with the lactose meal and more normal chemistry of digestion than was present when the ulcer was in the active state. Yet hunger pain returns from time to time.

S. Kemp, "Ugeskrift for Læger, Copenhagen," says, that with all due credit to the writers who have turned the lime-light of attention recently on duodenal ulcer, their work must be regarded as a step backward rather than forward, for time has shown, he insists, that the syndrome they have emphasized does not belong to the duodenal ulcer, but to justapyloric ulcer, regardless of whether the ulceration extends down into the duodenum or up into the stomach. Periodicity of the disturbances is not peculiar to duodenal or justapyloric ulcers, but is observed with other stomach affections at times, intervals occurring in which all the symptoms may disappear. Tardy pains may occur with affections other than ulcer. There is danger that the subjective symptoms will be given too much weight in diagnosing and that the physician's mode of questioning may suggest to the patient the answers that are anticipated, especially in regard to the subjective symptoms, and among these the tardy pains in particular. Previous examinations by other physicians or the conversation of other patients may afford suggestions that will modify the patients' statements as to the present status and the history of his case. Two cases in particular are cited to impress this lesson, both patients complained persistently of symptoms, assumed to be due to a duodenal ulcer, and both were operated on. Necropsy in each case revealed an old healed gastric ulcer. The subjective symptoms of the ulcer had persisted, reinforced by neurasthenia, and, notwithstanding the normal objective findings, gastro-enterostomy had been done in each case. The patients were men of 25 and 37, and both died a few days

after the operations, demonstrating anew the danger of a diagnosis based on the patient's complaints alone.

The conclusions to be drawn are: First—hunger pain is not in itself diagnostic of duodenal ulcer alone. Second—that the pain in ulcer cases is due to the motor spasm of the stomach, and not to the excessive acidity. Thirdly—that the hunger pain is prone to present itself first in justopyloric ulcer—secondly—in achylia gastrica—thirdly—in gastric cancer—fourthly—in neurasthenia, and lastly with a healed gastric ulcer.

AN INDICATED REMEDY IN SACCHARINE DIABETES.

BY

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OF all the well known diseases, possibly none holds a more singular position than does diabetes mellitus. In some respects it is quite unique. Year by year its quota of literature has been amassed and tabulated. This is relevant to its clinical characters, its urinary peculiarities, its prognoses at the different decades of life, and finally to its treatment which heretofore has been more or less fundamentally dietetic. Hence, it may be said that more is known about it from the perspective of the laboratory and from the clinical viewpoint than almost any other disorder, at the same time admitting, rather ruefully, that modern scientific medicine has been quite unable to extend its scope equally far on the side of curative treatment.

It has not been so long ago, that clinicians, realizing the essential nature of the complaint to be presumably an inability on the part of the economy to handle the dietetic sugars and starches immediately started right in, on this assumption to withhold all such "peccant" material from the diet. Unfortunately, in many of the severer grades, this form of treatment not only proved futile but in many cases, actually provoked an acidosis, with a swiftly oncoming comatose condition to be followed by a dissolution of the patient. It soon became apparent that such a strictly prohibitive form of treatment was hardly a curative one as the end result was only too often prejudicial not only to the well-being but to the life of the indi-

vidual as well. Then the view changed somewhat. The idea became current that a glycosuria was not so bad after all if kept well within bounds. Thereafter, a modicum of the starches and sugars was permitted and the practitioner with a penchant for mathematical calculation at once came into his own. This state of affairs seemed to suit fairly well, especially where an overweight diabetic was concerned. Unfortunately, however, patients who were unlucky enough to have sugar in their urine were tabooed when seeking insurance and were doomed to a life of restricted pleasureableness as far as the sweetened good things of an epicure were concerned. The man clinical held up his warning finger when due care was not accorded a high blood pressure and its dire consequences, which always laid in ready wait, to pounce upon the unwary. The afflicted creature was given to understand that a troublesome arteriosclerosis lay just around the corner. Even the conscientious surgeon was very chary about using his instruments lest a terminal infection result as a consequence of his interference. The diabetic also became an easy prey to intercurrent disease, especially tuberculosis and kidney complications, and due caution had to be exercised on this score as well. Altogether, the condition was very far from reassuring and cheery.

Just prior to the time of which I write, however, the dominant school often succeeded in causing a reduction in the amount of sugar eliminated by anodyne medication. Codeine was the form of drug most frequently used. But while this remedy actually did diminish the sugar it only too often induced a stuporous state, affected and locked up the renal and bowel refusal, and succeeded finally, in a host of cases in effecting an undesirable euthanasia.

The above remarks are in brief a summary of the main waves of recent thought upon much of the prevailing system of treatment in this very puzzling disease. I have not hazarded comment upon "fast days," oatmeal "cures," pancreatic enzymes, etc., which are all of more or less signal service, but of a palliative kind. The busy practitioner and the patient now-a-days, however, are quite rightly forcing *curative measures*, in contradistinction to merely palliative ones, into the foreground. And this is only natural, as length of days, even by itself holds forth an undeniable charm. And what shall we say of that greater possibility in life, liberty and the pursuit of happiness. To attain this field of Arcadia seems hardly

within the province of a high-grade diabetic provided he meekly submit to a rigorous system of treatment. By this means will not his liberty be set at nought, his happiness be neither here nor there and his life "cribbed, cabin'd and confined?"

Coming now to a form of treatment which I have found eminently practical, I shall preface my remarks by stating that I have insensibly come to regard a forced and continuous withdrawal of any of the essentials of the dietary as pernicious and a thing to be avoided as far as lies in our power to do so. Professor Chittenden, of Yale University, has well taken the ground that the normal man has need for fats, proteins, carbohydrates, salts and water, and that if any diet be lacking in one or more of these essentials and the same be persisted in for a moderately long time, disease changes are bound to ensue. Anything, therefore, in a system of treatment, which enables sooner or later the diabetic to adequately handle, assimilate and digest his former all-inclusive diet must be classified as a curative remedy in that disease. In the treatment I have effectively tried in the three cases I shall cite I think there is there disclosed a method which can cure this complaint, provided the disease is at all curable.

Some time ago, having several cases on my hands, my mind reverted to the peculiar character of the urine always found in diabetes. I think my ideas were next turned towards the character of the blood seen in these cases. This was back of the altered urine. In point of actual fact the urine was nothing more or less than the effete blood filtrate. Running on a little, I turned my inquiry upon the causes which were most likely to produce such a hemic change. Could there be proven an incriminating pathology in Claude Bernard's Centre? Was there a potential ablation of pancreatic tissue by some hidden sclerosing disease? How about those activating splenic enzymes? Were they up to snuff? Or, was the liver functionally inert? The more I thought about it, the more obscure became the determining pathology. Although baffled, like the rest, I still thought there must be a remedy somewhere. I still believed that Hahnemann was right when he said:

"As, then, in disease there is nothing to lay hold of except these phenomena, the disease can only be related to the required remedy through the symptoms, by means of which, in fact, it both makes known the need of the patient for help and points to the kind of help that is required."

My incriminating finger was already on the diseased blood, and that very blood was the incriminating cause of his appreciable symptom complex. As the older homoeopaths used the caseo-necrotic and broken-down tubercular mass to start with, and after triturating the same, used it for the cure of the consumptive state just so I lanced the patient's skin, abstracted his blood and potentized that for the cure of this disease. Following are my results:

Case 1.—Mr. E. C. F. Provision dealer. The patient is very stout, weighing approximately 220 lbs. He is short in stature. The man has a very bad familial medical history.

As nearly as I remember three or four of his immediate family had already died of the disease. His hours at work were very bad indeed as he arose at four o'clock in the morning to start with and had to later get cat naps to catch up in his rest. He had been taking Fulton's Compound about the time I first saw him. At first it seemed to reduce the sugar but later it went up sharply when he consulted me as a medical adviser. He had little time off from his occupation and I only saw him at intervals of two weeks or thereabouts. He ate with my sanction moderately of sugar and starch food-stuffs. I abstracted blood from his finger, letting it drop into a clean bottle. I used water as the menstruum in dynamizing the blood. Hering's scale was used. In making the potency I violently succussed by hand-pounding at each potency considerably over 100x (raps). Potency 6x every two hours was the medicine used.

ANALYSIS OF URINE IN CASE 1.

April 22, 1914.

<i>Chemical.</i>	<i>Microscopical.</i>
<i>Transparency.</i> Clear.	(Organic Sediment.)
<i>Chemical Reaction.</i> Acid.	<i>Casts.</i>
<i>Color.</i> Light yellow.	<i>Hyaline.</i> Few.
<i>Specific Gravity.</i> 1.027.	<i>Epithelial.</i> None.
<i>Urea.</i> 4 grs. in fld. oz.	<i>Granular.</i> None.
0.8 per cent.	<i>Others.</i> None.
<i>Albumen.</i> Trace.	
<i>Sugar.</i> Present. 3.85 per cent	<i>Epithelia.</i>
by wt. 18.5 grs. in oz.	<i>Small Round.</i> None.

Acetone. None.*Diacetic Acid.* None.*Microscopical.*

(Inorganic Sediment.)

*Crystalline.**Uric Acid.* None.*Calcium Oxalate.* None.*Triple Phosphate.* None.*Amorphous.**Urates.* None.*Phosphates.* None.*Spindle Form.* None.*Pavement Form.* Few.*Leucocytes.* Few.*Erythrocytes.* None.*Other Products.* Mucus,
not much.*Micro-organisms.* Few.

The above was the urinary picture at the time I gave him his diabetic blood 6x every two hours. My patient returned again on the first of May. His blood presented the following picture at this time.

May 1, 1914.

*Chemical.**Transparency.* Clear.*Color.* Light yellow.*Chemical Reaction.* Acid.*Specific Gravity.* 1.030½.*Urea.* 1.2 per cent. 6 grs. in
fld. oz.*Albumen.* Trace.*Sugar.* Present. 3.57 per cent
17.1 grs. in fld. oz.*Acetone.* None.*Diacetic Acid.* None.*Indican.* Little.*Microscopical.*

(Organic Sediment.)

*Casts.**Hyaline.* None.*Epithelial.* None.*Granular.* None.*Epithelia.**Small Round.* None.*Spindle Form.* None.*Pavement Form.* Few.*Leucocytes.* Few.*Erythrocytes.* None.*Other Products.* Mucus, not
much.*Micro-organisms.* Few.*Microscopical.*

(Inorganic Sediment.)

*Crystalline.**Uric Acid.* None.*Calcium Oxalate.* None.*Other Forms.*

Amorphous.

Urates. None.

Phosphates. None.

Other Forms. None.

At this time the patient had an aggravation of symptoms, despite the lowered percentage of glucose. He had more back-ache. Eyes were drowsy, in fact, can hardly keep them open. Sleep is poor. Feels drowsy all the time. Feels weaker also. Appetite unchanged. Passing a little more urine. Passes one pint nine or ten times a day. Some headache around the forehead. I told him to continue with the remedy. Patient took a modicum of sugars and starches.

In two weeks' time he again reported. Urine at this time still more improved.

May 15, 1914.

Chemical.

Transparency. Clear.

Color. Yellow.

Chemical Reaction. Acid.

Specific Gravity. 1.028.

Urca. 1.4 per cent. 7 grs. in fld. oz.

Albumin. Trace.

Sugar. Present. 3.28 per cent 15.7 grs. in fld. oz.

Acetone. None.

Diacetic Acid. None.

Indican. A little.

Microscopical.

(Inorganic Sediment.)

Crystalline.

Uric Acid. None.

Calcium Oxalate. None.

Triple Phosphate. None.

Amorphous.

Urates. None.

Phosphates. None.

Microscopical.

(Organic Sediment.)

Casts.

Hyaline. Few.

Epithelial. None.

Granular. None.

Others. None.

Epithelia.

Small Round. None.

Spindle Form. None.

Pavement Form. Few.

Leucocytes. Few.

Erythrocytes. None.

Other Products. Mucus, not much.

Micro-organisms. Few.

The patient at this time feels poorly. No change in asthenia. Passing the same amount of urine. Appetite is all right. Very

drowsy and sleepy. Bowels move a couple of times a day. Great pain in back. This is constant—day and night. On the 25th of May, he again reported. Medicine is the same—every two hours. Urine at this time disclosed the following:

May 25, 1914.

<i>Chemical.</i>	<i>Microscopical.</i>
<i>Transparency.</i> Turbid.	(Inorganic Sediment.)
<i>Color.</i> Yellow.	<i>Crystalline.</i>
<i>Chemical Reaction.</i> Acid.	<i>Uric Acid.</i> None.
<i>Specific Gravity.</i> 1.029.	<i>Calcium Oxalate.</i> None.
<i>Urea.</i> 1.8 per cent. 9 grs. in fld. oz.	<i>Triple Phosphate.</i> None.
<i>Albumen.</i> Trace.	<i>Amorphous.</i>
<i>Sugar.</i> Present. 2.47 per cent 11.9 grs. in oz.	<i>Urates.</i> None.
<i>Acetone.</i> Trace.	<i>Phosphates.</i> None.
<i>Diacetic Acid.</i> None.	<i>Other Forms.</i> None.
<i>Indican.</i> Little.	

Microscopical.
(Organic Sediment.)

<i>Casts.</i>	<i>Epithelia.</i>
<i>Hyaline.</i> Not many.	<i>Small Round.</i> None.
<i>Epithelial.</i> None.	<i>Spindle Form.</i> None.
<i>Granular.</i> None.	<i>Pavement Form.</i> Few.
<i>Others.</i> None.	<i>Other Products.</i> Mucus, a little.
<i>Leucocytes.</i> Few.	
<i>Erythrocytes.</i> None.	<i>Micro-organisms.</i> Not many.

At this time no improvement in strength. No improvement in backache. Appetite good. Bowels the same. Passing no more urine. *A steady improvement in the sugar content is keeping up, however.* The patient reported again on the ninth of June. Urine gave this finding:

June 9, 1914.

<i>Chemical.</i>	<i>Microscopical.</i>
<i>Transparency.</i> Clear.	(Organic Sediment.)
<i>Color.</i> Yellow.	<i>Casts.</i>
<i>Chemical Reaction.</i> Acid.	<i>Hyaline.</i> Few.
<i>Specific Gravity.</i> 1.03½.	<i>Epithelial.</i> None.

Urea. 2.6 per cent. 13 grs.
in oz.

Albumen. A decided trace.

Sugar. 1.29 per cent. 6.2
grs. in oz.

Acetone. Present.

Diacetic Acid. None.

Indican. Little.

Inorganic Sediment.

Only thing positive was *not*
much uric acid.

Granular. None.

Epithelia.

Small Round. None.

Spindle Form. None.

Pavement Form. Few.

Leucocytes. Few.

Erythrocytes. None.

Other Products. A little
mucus.

Micro-organisms. Many.

At this time patient was overjoyed at his condition. He complained of absolutely nothing. Patient is still under treatment.

Case 2.—Mrs. D., Ridge Avenue. Reported for treatment because of great amount of urine voided which burns her in passing. Vulvar itching so marked she thinks she will become insane with it. Passes urine six or seven times daily, a pint at a time and is also bothered with nocturia. The very same day the urine was examined which disclosed the following findings:

ANALYSIS OF URINE.

June 25, 1914.

Chemical.

Transparency. Turbid.

Color. Light yellow.

Chemical Reaction. Acid.

Specific Gravity. 1.015.

Urea. 1 per cent. 5 grs. in oz.

Sugar. 1.29 per cent. 6.2
grs. in oz.

Acetone. Present.

Diacetic Acid. None.

Indican. Little.

Microscopical.

Under *organic sediment* the things of note were: many pavement-form epithelia, a few leucocytes, not much mucus, and many micro-organisms.

Under *inorganic sediment* of crystalline or amorphous nature absolutely nothing incriminating was found.

I immediately potentized by hand some blood of the patient and gave it to her to take every two hours. At same time permitted her to take of a fairly moderate starch and sugar diet. On the 10th of July she again reported. The specific gravity was unchanged at 1.015. Amount of sugar had fallen

to 0.2 per cent or about one gr. to the ounce. There was no albumen in the second test either. Her itching has wonderfully improved. She only scratches herself once a day. Before it was incessant. The vulvar itching is practically gone. Before she could hardly sit still. Nocturia she says has wonderfully improved. The dryness of skin has bettered. On the 14th of July she again reported. Urine down to 1.013 and the sugar but a trace. Potency used was the 6th decimal. Case still under my care. She has not reported lately.

Case No. 3.—John E. P. A retired gentleman, formerly in the clothing business. He is now 68 years of age. Trouble started with him five years ago. When on a trip to the Atlantic coast he found himself quite unable to keep himself awake at a card game which he had joined in, on the journey down. He soon developed great itching of the skin and experienced very considerable difficulty in voiding urine, passing the same every few minutes. Used to get up at night six to eight times. His familial history was none too good as he had had a brother die of the disease, subsequent to an operation for gangrene of the toe. He came under the treatment of an excellent homoeopathic prescriber who aided him along the rough spots for years. He averaged, on the whole, as far as specific gravity went, about 1.035 and he had about two per cent of sugar in his urine. He drew a lot of insurance all these years and never did any more work than he had to. On the 16th of June or thereabouts I began treating this man with his own blood. I used Hahnemann's centesimal scale and "ran it up" to the 10th by hand in a stout bottle. Over 100 turns were used at each succession. On the 16th of July the urine was again examined. It had dropped to 1020 and there was no vestige of sugar found after very careful testing. Medicine taken in this case every two hours. He ate moderately of sugars and starches.

In conclusion, I would like to state that I think this method very practical in the treatment of this disease. As far as diet goes let it be not too restricted. If gross pathological change has so effected structure that cure is impossible no remedial agent or system of diet may suit. All we are mainly interested in is concrete and cold facts. What the method has done for me it will do for anyone else. I publish my experiences only in the fond hope of furthering a system of treatment which I think vastly superior to any other and that system goes under the caption of Hahnemannian Homoeopathy.

RELATION EXISTING BETWEEN INFECTION OF THE TONSIL AND CERTAIN SYSTEMIC CONDITIONS.

BY

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CONDITIONS following attacks of acute tonsilitis of varying degrees coming under my observation led to the question as to the relation existing between infections of the faucial tonsils and certain systemic conditions. Whether rheumatism, tuberculosis, acute endocarditis and acute nephritis were the cause or the result of acute tonsillar inflammation.

Histologically, the tonsil is immature in infants under one year with resulting slight infection seen at this period of life. In childhood, with the increased activity of the lymphoid elements producing poor drainage there is ready infection of the gland; while in adults the heavier layer of epithelium prevents to an extent the passage of bacteria.

The tonsil occupying the triangular space between the anterior and posterior pillars of the soft palate offers a position for ready attack by the numerous bacilli of the oral and nasal regions. The irregular surface indented with crypts opening into which are the ducts of the muciparous glands situated in the stroma of the tonsil, easily lodges the bacilli.

The follicles of the tonsil are surrounded by a close plexus of lymphatic vessels from which the lymphatic vessels pass to the submaxillary glands below the angle of the jaw and from thence to the deep cervical glands leading to infection of the general system. Until recently the tonsils were thought to have no lymphatic vessels, that all infection was through the surface of the tonsils.

It was pointed out by Frankel, of Berlin, that the presence of acute coryza following cauterization of the nose, difficult eruption of the teeth, or even inflammation of the naso-pharynx and lateral columns, tonsilitis supervened as a secondary process. It was also shown that the injection of coloring matter into the nasal mucous membrane was found after a time in the tonsils of both sides.

Thus we see the tonsils may be directly infected by portions of the nasal tract. The tonsils may be a protective measure against bacterial invasion, if healthy, or a menace, if diseased. The function of protection by elimination is important.

The tonsils are believed to be one of the many sources of absorption of the tubercular bacillus as well as those of many other diseases. In absorption of the tubercular bacilli from the nose, naso-pharynx, lateral columns, it is believed that an effort is made by the tonsils to retain the bacilli, as any other lymphatic gland, and prevent deeper infection. Proof of this function is necessary so that removal of the tonsils does not take away a protective organ which in health prevents deeper trouble and under ordinary conditions is not a source of infection.

Goodale showed that the protective characteristic against bacteria was definite. Infection enters through the tonsils which attempt to overcome the invaders; failing in this the next lymphatic glands, the submaxillary, take up the fight. Deeper infection was seen in the enlargement of the cervical glands. If the tonsil is so diseased that it is unable to fight, it becomes an obstacle of defense and portal of entry for disease.

It is the general custom to advise enucleation of the tonsils in tubercular and rheumatic cases. The close relation between acute rheumatic fever and tonsillitis has long been recognized. The earliest writer to point out definitely the rheumatic character of quinsy was Lennox Brown: "The Throat and Its Diseases," London, 1878. One writer reports 50 cases of tonsillitis in which 45 gave a history of rheumatism.

It is now quite generally believed, that, besides acute rheumatism, acute tonsillitis is very often the immediate cause for other systemic infections as acute endocarditis and acute nephritis. Billings says, "There can be no other reason for the prevalence of rheumatism found in childhood than the frequency of local infections in the throat and nose."

An important predisposing cause of infections is the condition of the tonsils. Hypertrophied, ragged, spongy tonsils readily lodge bacteria. However, mere size of the tonsil appears to be no indication of the amount of trouble to the individual. Simple hypertrophy with no history of attacks of acute tonsillitis is said to be not as dangerous as a small tonsil frequently affected.

In my own experience cases of acute tonsillitis of varying degrees developed acute rheumatic fever in one to three weeks after the throat symptoms had subsided. A patient, 54 years of age, with no previous history of rheumatism suffered from an attack of acute superficial tonsillitis, accompanied with a severe edema of the soft palate and uvula, lasting 24 hours, which

subsided in a few days. About three weeks later she developed acute rheumatic fever, in which all the joints of the extremities were involved. A child 11 years of age having acute superficial tonsilitis became affected with torticollis. The child is anemic and undersized with large, spongy tonsils.

Another girl 25 years old, with a history of previous tonsilitis and removal of one tonsil 15 years ago, recently developed sore throat with a large white patch on the site of the removed tonsil first and then involving the hypertrophied remaining tonsil. Ten days after this attack this patient developed a fever with pain and swelling of the feet and acute endocardial symptoms.

These cases with others being similar seem to point to the tonsil as the undoubted source of infection, and that its function of protective elimination is rendered ineffectual by the frequent or severe exposures of the more severe exposure of the more destructive bacteria.

THE ABUSE OF NORMAL SALT SOLUTION.—L. Litchfield concludes that the administration of any artificial serum as a routine post-operative practice is questionable therapeutics. Too much water may fatally embarrass the heart. Too much salt may fatally embarrass the kidneys. When fluids cannot be taken by the mouth, thirst may be relieved by tap-water or by isotonic dextrose solution given by enteroclysis. The dextrose solution is preferable when there is danger of acidosis and in all cases of inanition. When there is a distinct indication for an artificial addition to the amount of the circulating blood-serum this may best be accomplished by the use of dextrose solution; isotonic (5.1 per cent) by enteroclysis isotonic, hypertonic (up to 30 per cent) or hypotonic (2 per cent) by intravenous infusion. There are no contraindications to the use of dextrose, but there are often serious contraindications to the use of saline solutions. In all urgent cases the intravenous method is preferable. Greater care should be exercised to see that all water used intravenously is not only sterile but also non-toxic. In medical practice artificial sera should be more frequently employed. Isotonic or hypotonic sera should be used after severe hemorrhage, exhaustive vomiting, or diarrhoea; or in cases of extreme inanition. Hypertonic sera should be used in toxemic cases, including eclampsia and uremia; in cases of oliguria with threatened uremia; to combat acidosis; or in toxic states, as after anesthetics, gas, or morphine poisoning, etc. The author regards Fischer's theory of nephritis as a gratuitous hypothesis and his recommendations regarding treatment not justified either by established physiological facts or by clinical experience.—*Journal Am. Med. Assn.*

THE SOCIOLOGICAL ASPECT OF MENTAL DEFECTIVES.

BY

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The term "Mental Defectives" includes the feeble-minded, imbeciles, idiots, epileptics, criminals, the deaf and dumb, etc. The imbeciles and feeble-minded especially will be discussed in this paper, and what is said, however, may apply as well to the other classes.

Compulsory education, school medical inspection, mental tests and social workers have brought imbeciles to light that were previously not recognized as such.

The institutions for the care and training of the imbeciles and feeble-minded are all full and yet more than half are free and unguarded. This fact makes some of us realize the increasing greatness of the problem and troubles in the near future.

That heredity is the most potent factor in the procreation of the unfit cannot be denied or ignored. From the earliest Biblical times, it has been recognized that "like begets like." All nations to-day even point to the old Greeks when they led in civilization and the finer arts, and the Spartans, who always will be esteemed for their physical perfection, considered it necessary to fall in with nature's undisputable law of the survival of the fittest. Many other early and powerful peoples realized the necessity of conserving the strong at the expense of the weak.

If any readers are not clear about heredity, it would be worth while to read some of the works of Galton, Pearson, Spencer, Darwin, Bateson, Yule, Mendel, Thompson and "Mental Defectives" by Henry H. Goddard, Ph.D., Director of Research, New Jersey State Training School for Feeble-Minded Children, Vineland, New Jersey, out July 8, 1914, published by MacMillan. Dr. Goddard tells me that the present day scientists adhere to the Mendelian Formula of Heredity.

If both parents are feeble-minded—all children feeble-minded, etc.

It is a fact that the sexual instinct is either the strongest or next to the strongest of human and animal instincts. Given

these instincts with no control or inhibition or sense of moral responsibility, the reason is plain enough why the imbeciles multiply twice as fast as normal mankind. Their known reproductiveness plus their positive degenerate tendency presents to the American people an important sociological problem.

Permit me to present some few experiences of Dr. Martin W. Barr, Chief Physician, Pennsylvania Training School for Feeble-Minded Children at Elwyn, Penna. (And may I pay this little tribute right here, that I knew of no man more gentle, thorough, and capable in his particular line nor of one commanding so much respect and esteem equally from pupils, colleagues, the medical profession and lay people as does Dr. Barr.) To quote Dr. Barr:

(A.) The family histories, collated in the institutions and hospitals of our land, form in themselves a library of tragedies which should convince the most skeptical of the magnitude of race suicide, increasing with each generation. My own study and observation alone, of over 4,000 degenerates, shows such examples as. A man aged 38 years, the father of 19 defective children, all living, he and his wife both under par mentally; as was another couple with 9 imbecile children and an idiot woman with 7 idiot children. A forcible instance is that of a man with two daughters and one illegitimate grandchild, all feeble-minded. The father served as a juryman, and shortly after, application was made for his admission to the training school for defectives of which I am in charge. One might say there was a clash of rights in this instance. Which? Is the individual or the public to be considered? I could name a family, one of the proudest in the land, where there are five children, an aunt and two uncles all feeble-minded.

Yet another, which in seven generations, numbering 138 individuals, records ten still-born children (premature births) sixteen insane, seven imbeciles, three epileptics, and thirty-two with mental peculiarities, so pronounced as to occasion remark. Of the 138, there remain eighty apparently normal, who are, nevertheless, hopeless slaves of a neurotic heredity, direct or collateral.

In a study of fifteen imbecile girls, three were recognized prostitutes; nine had each one illegitimate child (two being the result of incestuous intercourse with brothers) one had 2;

two epileptics had, the one three, and the other four idiot children.

Four feeble-minded women had forty illegitimate children.

A feeble-minded woman living in an almshouse since early childhood, allowed to go out to service periodically, had given birth to six illegitimate children, all inheriting her defect.

An imbecile drunkard is the father of three feeble-minded children. The daughter, seduced before the age of sixteen, gave birth to an idiot child, one son is a harmless imbecile, but the other is a moral imbecile, a sexual pervert, a thief on the street, and a pyromaniac, firing in sheer wantonness, a large mill property.

Another shows the entire family for three generations below normal. Father, mother, mother's sister and father's uncle, all imbecile, five children feeble-minded.

One insane woman, whose brother and sister committed suicide, had five sons. The oldest feeble-minded, a drunkard and a hobo, had one son, a criminal. The second son, insane, had three imbecile children. The third, an insane epileptic, had three imbecile sons, one of whom was an epileptic. The fourth son was insane. The fifth apparently normal, had a moral imbecile son and an epileptic daughter.

In these cases, do we note the right of the individual to bless or to curse the race and where may we trace the beneficence of law protecting him from society and society from him? Echo answers. The rights of the individual must be maintained. "Who dare tamper with them?" cry some of our legislators. Yes, he must be allowed free exercise, even if he does poison the life-blood of his neighbors' family with his vile infusion.

Professor Puellman, of Brown University, studied the 800 descendants of a confirmed drunkard for six generations and claims that they cost the state \$1,208,000. The familiar 709 Jukes in 75 years cost the people of the United States \$1,308,000. The "tribes of Ishmael," descendants of an escaped convict in the seventeenth century were studied for 48 years, and the degenerates numbered in the thousands, but I was unable to learn the cost of caring for the dependents.

The high, low and idio-imbeciles do not present greatest problem.

There is a large number of moral imbeciles, who come

from all classes, rich and poor, educated and uneducated. This class, besides reproducing many of their kind, are spreading most vicious, degrading and demoralizing influences on normal boys and girls. The teaching of school hygiene will be an easier problem, when the public schools, as well as the public are protected from this class of polluting degenerates, inexpressible in their vileness and harmfulness. Let me tell you of a case which came to my notice only a few months ago.

A convalescent typhoid boy of sixteen, a patient, expressed a fear of having a friend of thirty-three, a member of the same vested choir, call on him. The mother being suspicious and knowing that I lectured on hygiene at the local high school, turned him over to me for further questioning.

The following, I believe to be true. This big rascal imbecile not only taught the choir boys to masturbate by illustration and assistance, but gave them public demonstrations of coitus and wasting the discharge with a feeble-minded girl. (Member of the same church.) After both imbeciles had been removed from all active church work, and the big imbecile brute brought before the church officials, etc., didn't he further prove his imbecility by circulating a petition to be reinstated in the choir.

Now, if this fellow were a eunuch, he could be made a most useful and harmless pack horse in the community.

Dr. Goddard (B) says that results of investigations show that at least two per cent public school children are mentally deficient, and incapable of taking their places in society. Dr. Goddard also says that it has been amply verified that there are over 15,000 mentally deficient school children in New York City schools. With my seven years' experience as a public school medical inspector in the Norristown Public Schools, I can testify to this being a conservative estimate.

In a letter I received from Dr. Goddard, he says that "the number of defectives in the United States is estimated from 200,000 to 300,000. I am afraid the latter number is not too large."

We are certainly safe then in saying that 250,000 imbeciles should be segregated for their own training as well as to protect the public. \$200 to \$300 a year, and even more in some institutions is the cost for maintenance of an imbecile. \$62,500,000 a year, it would cost to protect our nation from

the baneful influence of the irresponsible non-moral and dangerous defective by segregation.

Thirteen states have surgical laws permitting surgical interference. Several years ago, Indiana passed certain laws to prevent procreation of confirmed criminals, idiots, imbeciles and rapists.

(C) H. C. Sharp, of Indianapolis, who was for thirteen years chief physician of the Indiana State Reformatory, performed vasectomy on several hundred. This operation is simply ligating the Vas Deferens. It positively stops procreation, is not painful nor serious, and there is no cystic degeneration of the testicle.

(D) Dr. C. V. Carrington, surgeon, Virginia Penitentiary, and others, who have performed this operation, claim that the inhibitory centres are greatly strengthened, has cured many profound masturbators, given neurasthenics more strength and better dispositions, has made vivacious criminals and imbeciles more amenable to authority, and more civil to their associates. It is also said that normal sexual desire or function is not in any way injured. Therefore man's liberty is not abridged.

Dr. Barr and many others feel that castration is the better treatment as the results are more positive and permanent than by vasectomy. Castration is not only a positive preventive of procreation, but is decidedly beneficial mentally and physically. Vaginal fallocotomy is not necessarily serious and especially when one considers the benefit. It is the only positive cure for a certain class of prostitutes. Consider for a moment how many imbeciles there are who might be self-supporting if they were sterile. Surgery would at least permit 25 per cent to be free from dependency. If all of the imbeciles were segregated, that would mean \$15,000,000 annually. There have been imbeciles keen enough to realize the baneful influences of their abnormal sexual desires and have plead for castration. Also there are many castrated imbeciles, who have expressed their satisfaction at the benefits ensuing the operation.

We should not allow maudlin sentimentality to interfere with a clear and comprehensive view of the problem. Those sentimentalists who claim that individual rights are being interfered with by surgical measures, are not such advocates of individual rights when there is a small-pox sign on their

neighbor's door, or when gallons of impure milk from the cans of their dealer are poured into the sewer by the authorities. The harm created by small-pox and impure milk is but temporary and superficial compared with the devastating effects of one imbecile with his possible thousands of degenerate posterity.

Then, too, taking the financial and conserving point of view, Congress spends annually, millions for the protection and development of the plants and animals of our country. But thirteen of our states have passed laws for the prevention of degeneracy in the human race, and for protection of pure blood. Two of these states, New Jersey and Iowa, have declared their laws unconstitutional. To be sure, laws relating to this subject are apt to be either too lax or too rigid. To overcome difficulties and to insure justice and economy, there should be a commission of representative men from the professional and business worlds.

(E) Descartes says: "That if it be possible to perfect mankind, the means of doing it will be found in the medical sciences." After we have once come to a full realization of the unending and pernicious poisonings that are unnecessarily permeating our social life and being handed down from generation to generation, increasing our taxes and impoverishing our blood, can we, representatives of the noble profession of medicine, shirk the responsibilities that are peculiarly ours and let indifference or sentimentality annul our sacred vow—to benefit and protect mankind?

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THE RELATION OF ALCOHOLISM TO INSANITY.

BY

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WHEN the modern doctrine of preventive medicine was first promulgated, not a great many years ago, the disease receiving first consideration was the one which produced the greatest mortality,—tuberculosis.

To my mind one of the encouraging signs on the medical horizon at the present time is the growing emphasis placed upon all inquiries into the causes of disease and the establishment of preventive measures to counteract the operation of such causes. We therefore have come now to be interested not only in the diseases which kill, but in those which result in the impairment of the worker, and the usefulness and pleasures of life as well.

During the past five years there has been a well-organized endeavor to reduce the alarming amount of mental impairment in the United States through the *Mental Hygiene* movement. A National Committee for Mental Hygiene, founded February 19, 1909, came into existence because of the conviction, among some of those whose work had brought them closely into contact with the problem of mental diseases, that there was urgent need for a national agency to help raise standards in the care and treatment of the insane and to work for the prevention of mental and nervous disorders. The importance of this problem is evidenced by the fact that in States like New York and Massachusetts one out of approximately every 275 persons of the population is mentally unbalanced. It is an impressive record that \$4,000,000 was appropriated by the 1913 session of the Pennsylvania Legislature for the care, treatment and maintenance of the indigent insane of the Commonwealth for and during the two years beginning June 1, 1913, and that the biennial increase of such dependents in this Commonwealth now averages about 1,200. Furthermore, the National Committee for Mental Hygiene in their recent report state:

"On the date of the last federal census, January 1, 1910, there were 187,454 persons in institutions for the insane in this

country. This number exceeds the number of students in all the colleges and universities in the United States. It exceeds the number of officers and enlisted men in the United States Army, Navy and Marine Corps. About 30,000 new cases of mental disease are admitted to institutions in the United States each year and the annual increase in the number of patients under treatment is about 6,000. If all the States provided for their insane as adequately as do New York and Massachusetts there would be more than 300,000 patients in institutions. A more concrete illustration of the prevalence of insanity is the fact that the number of hospital beds for the insane of New York City exceeds the number of hospital beds in all the general hospitals of that city.

"The cost of caring for the insane in a State making adequate provisions exceeds any other single item of expense, except the amount expended for public education. The average annual cost of maintenance in institutions for the insane in the United States is about \$175 per patient, making the total cost during the year 1910 for those institutions, \$32,804,450. As it is estimated that the cost of the Panama Canal will be \$325,201,000, and that it will take ten years for its completion, it is seen that the annual cost of caring for the insane is greater than the annual cost of construction of that great work. The latter sum is so great that it was deemed necessary to distribute it over a number of years by the issue of bonds: whereas the cost of caring for the insane is an annual expense, which has to be met from current revenues of the States.

"In order to state fairly the cost of mental diseases there must be added to this great sum the economic loss to the country through the withdrawal from productive labor of so many people in the prime of life. It has been stated by the United States Commissioner of Labor that the average value to the community of an adult between the ages of 18 and 45 is \$700 per year. Estimated upon this basis, the annual economic loss to the United States through the confinement of 187,454 people in institutions for the insane is more than \$130,000,000. If this is added to the cost of maintenance the total is more than \$162,000,000,—an amount equal to the entire value of the wheat, corn, tobacco, dairy products and beef products exported annually from the United States.

"Such statistics serve as a means of comparison, but they cannot convey an adequate idea of the most serious results of

mental diseases,—the personal suffering and unhappiness, the social and family disasters and the business troubles which they cause. It should be remembered that the same factors which bring about the commitment of people to institutions for the insane are responsible for much mental disease which is never recognized and for loss of efficiency, failure to meet difficult situations of life and conflicts with conventions and laws. These often depend upon mental disorders or mental defects, although that fact is not generally recognized. Accounts of murders, suicides, marriage troubles and many kinds of misdemeanors often have a very definite meaning for those who are familiar with the abnormalities of conduct which result from mental disease. The frequency of these social disasters indicates the inadequacy of present methods of dealing with the problem of mental diseases.”

Humanitarian and economic reasons alike demand that every effort should be made to control the spread of insanity. We know that there are certain essential causes of mental disease and that some of these are within our control. They are chiefly heredity, alcoholism and syphilis. The first great cause in the production of insanity is the *Use of Alcohol* in the form of stimulating beverages. It is an undeniable fact that alcohol is a stimulant poison: in large quantities it is a dangerous one, in small amounts it is less so.

When we approach the subject of the *effects of alcohol*, we are impressed by the difference in individuals as regards susceptibility. The degree of resistance to its action may, on the one hand, be enormous: and on the other, very slight. One man may stand a daily allowance of a quart, or even a quart and a half, of whisky for weeks and months before he is overtaken by mental and physical collapse; while in the case of his neighbor, a few glasses of beer or wine will cause a violent delirium from which the subject may pass into a condition of acute maniacal excitement. Feebleness of resistance may be due to certain causes which predispose to its excessive use,—namely, a neuropathy, hereditary or acquired.

In considering the individual,—we have to interpret the peculiar effect of alcohol in his case and determine why a given amount of alcohol can be used without appreciable harm in one person when the same indulgence is followed in another by alcoholism in some one of its varied forms. The answer must be found in an analysis of the constitutional peculiarities of each

person, the influences surrounding him and moulding his activities, and his individual idiosyncrasy for alcohol. The use of alcohol in moderate amounts is considered by many a matter to be treated independently of any study of alcoholism. It is difficult to convince one, who uses alcohol with so little damage to himself, of the remote but actual connection between his example and the burden of wasted lives, of inherited weakness borne by individuals, families and the public as a result of alcoholism. His example helps to establish social custom, however, and social custom in all grades of society is largely responsible for the formation of the drinking habit by those fated to become its victims. Of any given number who in early life begin the use of alcohol, an unknown but not inconsiderable percentage will surely suffer from the effects of alcoholism. It cannot be emphasized too strongly that social custom,—the moderate, temperate use of alcohol,—is the cause of inebriety and its attendant evils.

In view of the foregoing statements, we are no longer allowed to consider the poison in only its physiological and pathological effects, but we have to consider the *drinker* besides. The mode of reaction of the individual after the use of alcohol has a clinical importance equal to that of the action of the poison itself, because it is the reaction of the person who indulges which so much modifies the form of alcoholism. The difference in an individual is largely a question of the degree of stability of the nervous system,—inherited or acquired: the less stable the equilibrium, the greater is the effect of the poison and the more enduring its action upon the organism.

When we study closely the *causes* of mental diseases, we soon recognize the fact that in the great majority of cases, the disease is produced not by a particular or definite cause, but by a series of unfavorable conditions which prepare the soil, and then by their continued action, determine the outbreak of insanity.

Of all the varied causes of mental infirmities, heredity and alcohol are among the most important. Alcohol and heredity are so closely connected that it is almost impossible to separate them. Pronounced alcoholism in the parents always means examples of mental disease and weak mindedness in the children,—provided the alcoholic tendency is not acquired somewhat late in life.

No one will maintain that a child inherits its parents' recol-

lections. Therefore, it is plain that the actual craving for drink is probably never transmitted. The mind of a man is a blank at birth,—and it follows (since so much is acquired) that the disposition and character of every man must be almost entirely acquired, and not inborn, as is usually assumed. In the absence of actual personal experience of alcohol, there can be no desire for it. Moreover, we realize that the child will generally exhibit the trait of his educators, even though they be not his progenitors. Therefore, surroundings and environment must be important factors.

Tanzi says: "Great importance must be attached, rather than to actual heredity, to similarity of environmental conditions, to example and to family habits. On the other hand, of much greater importance than direct heredity is the existence of a general neuro-psychopathic constitution. It is certain that a large proportion of cases of alcoholism occur among those who are predisposed to diseases of the nervous system, those whose nervous system is actually disordered (such as the neurasthenics and psychathenics), and those who exhibit instability and evidences of a bad heredity. In all of these there is always a marked tendency to be attracted, not only to alcohol, but also to nerve stimulants in general."

It has been scientifically proven that alcohol is not beneficial to the human economy, especially to healthy people, to the winners of life's race, the fittest, and to those who hand on their characteristics to posterity. Men drink alcoholic beverages,—in the *first place*, to satisfy thirst,—an organic craving for a necessary constituent of the body—water: in the *second place*, to gratify the sense of taste,—in other words to produce a sensation of pleasure through excitation of the nerve endings in the mouth: in the *third place*, to produce by alcohol circulating in the blood (and acting directly on the brain) a stimulation, or what feels like a stimulation but which soon has a stuporous or paralyzing effect. But, though men drink for three reasons, it must not be supposed that all drinkers are sharply separable into three distinct categories. The same man, at the same time, may drink to satisfy his thirst, his palate and his cravings for drunkenness. The fact remains, however, that while men may drink merely to satisfy thirst or taste, the principal motives with others is to obtain those feelings of intoxication which alcohol produces when acting in considerable vol-

ume directly on the central nervous system,—i. e., the brain and the spinal cord.

It is of interest to note the variety of conflicting excuses offered by mechanics for the necessity of taking liquor. Some claim their work calls for stimulation; others take only as much as can be regarded as food; the cook, the fireman and the iron-moulder say they require it because of great heat,—while the night watchman, the truckman and the ice-man think they need it to drive off the cold.

Alcoholism is the cause of insanity in from twenty to thirty per cent. of all male admissions to hospitals for the insane: among female admissions, the proportion is only about one fourth as large.

Excessive indulgence produces the sufficiently familiar picture of ordinary drunkenness: and such excesses if frequently repeated are apt to give rise to certain psychoses which are specifically alcoholic, that is to say psychoses which occur only on the basis of chronic alcoholism. These are: pathological drunkenness, delirium tremens, acute alcoholic hallucinosis, alcoholic pseudo-paranoia, the polyneuritic psychosis and alcoholic dementia or chronic alcoholic insanity.

The subject of alcoholism may be divided into two sections of equal importance. First, the poisonous effects of alcohol in a strict sense; and, second, the analysis of intoxicated patients in reference to their various reactions. Considered with regard to its connection with social conditions, *alcoholism* may be regarded as a social disease,—having its predisposing and exciting causes, course, consequences and treatment.

The primary effect of alcohol is upon the vaso-motor portion of the nervous system. It acts upon this as a narcotic, in a degree paralyzing it, and thus removing the restraint it ordinarily exercises. The action of the heart is increased, and larger quantities of blood pass to the nerve cells of the brain and other portions of the system. The motor cells are indirectly stimulated and the individual becomes more active and restless, a feeling of increased physical force and importance is engendered. All the secretions and bodily functions are more active. The *mental faculties* are also excited: thought precedes thought more rapidly; the imagination is roused and speech quickened; a general sensation of good feeling pervades the brain; the person becomes happy and joyous; the recollections of matters long since past comes back with clearness, and the

individual has a larger measure of courage and hope for all undertakings. This condition of mind and body which continues for a longer or shorter period according to the amount of alcohol used, the susceptibility of the person using it, and the frequency of its repetition is then succeeded by a corresponding diminution of functional activity. The power of continuous attention and self-control weakens; and later the power of voluntary movement becomes impaired and finally abolished. The individual sleeps or passes into a semi-comatose state for several hours. In extreme cases the most automatic centers of all, —those presiding over circulation and respiration,—may be overwhelmed. The system may, in a measure, become tolerant of the presence of alcohol and require an increased quantity to produce the states of excitement, but this is the case to only a limited extent. The daily use of alcohol and its effects upon the nervous system, tend to create a craving for it with its continued indulgence, the organs of excretion fail to speedily remove it from the circulation and it remains in contact with the elements of the brain until its toxic effects are fully established. The mind becomes clouded and its activity partially suspended: the intellectual faculties no longer guide the purposes of the individual, and a condition supervenes in which no more alcohol can be tolerated by the stomach. Then follow the general conditions which pertain to the alcoholic psychoses, in those cases in which the system has become sufficiently poisoned by its former ingestion.

The clinical aspects of alcoholism are most varied, and are of extreme interest. It is quite certain that drinking and insanity stand in relation one to the other in several different ways. First of all, there is the habitual drunkard or inebriate man or woman who has a habit of drinking, and will get drunk whenever it is possible. This habitual drinking may, if it is excessive, result in delirium tremens, or it may be in acute alcoholic insanity or in chronic alcoholic insanity. One may, however, continue drinking for many years without any of these results, but while so doing, may cause the ruin of his business, his profession and prospects. It is for these cases that we require legal machinery to control the patients for such a time as will enable them to overcome the habit.

Dipsomania proper is an insanity, an insane impulse to drink which occurs in individuals by hereditary taint. They are not insane from drink, but insane before they commence to drink.

This form of insanity is almost invariably periodical, and may recur after a long or short interval. Its duration also will vary from a few days or a week to some weeks or months, depending upon the quantity of alcohol taken.

Between the true dipsomaniac (who drinks impulsively) and the common drunkard,—there is a very numerous class of drinkers (actual intermittent drunkards) who seem to obey a sort of impulse, but are more like a common drunkard through their pronounced liking for intoxicating drink, and are also like true dipsomaniacs in consequence of certain psychological characters: as a matter of fact, they are often confounded with dipsomaniacs. They are patients with a weak will, without energy, and easily directed in any direction. Nevertheless, they strive, and this consideration explains why their excesses occur periodically in a recurrent manner: they resist until some tempting opportunity makes them forget all their good resolutions. They are victims of occasions which they do not want to avoid, because they love alcohol. To draw a line of *demarkation* between the intermittent drunkards and the true dipsomaniacs on the one hand and the true habitual drunkards on the other, is often very difficult. One distinction which may be made between the first two is that the dipsomaniac, when not under the influence of the paroxysmal attack, is proof against temptation. But the intermittent drunkard loves alcohol, and although he may promise repentance and vow he will never do it again, at the first opportunity his courage and will power vanish and he falls.

While *ordinary drunkenness* is hardly to be classed among the insanities, there are certain mental symptoms appertaining thereto whose principal features demand a brief consideration. The most striking feature is an unreasonable irritability, which frequently leads to outbreaks of passion of a blindly impulsive character, of which their families or their associates are often the victims. Wife-beating, inhuman treatment of children during the stage of inebriety, attacks upon associates upon the slightest provocation, are of daily occurrence. The brutalizing influence of the drug, too well known to need minute description, is shown in the loss of moral sense, the indifference to the feelings and sufferings of the family, and to the loss of honor, place or position, which inevitably follows the continued indulgence. The alcoholic is enwrapped in himself; he becomes a brutal egoist, careless of his work, his standing, of everything

that he formerly prized. Those dependent upon him may suffer from want, but as long as he has the means to procure his favorite stimulant, no ethical code can bind him: his sole desire and craving is to become stupefied. As time passes and the bad habit is continued, there develops besides the moral weakness, a mental deterioration, a true progressive clouding of the faculties. Reason is dethroned from her high place, brutal instincts develop more and more, the will power is shattered and logical thought becomes impossible. The individual is no longer capable of earning a living, the mental degradation progresses, and finally a true dementia ensues and remains permanent.

It is a common remark "that every symptom of insanity may be produced by drink." Some men, when drunk, are either depressed or exhilarated, some are furious and may commit homicide or suicide. The effect of acute drinking is to produce in many the delirium which we call "delirium tremens," which may abound in delusions with false sight and hearing. These are very nearly always of a very disagreeable and frightful character, rendering the person sad and fearful.

I have mentioned above that some persons may continue the use of alcohol in excessive amount for a long period and yet escape the usual penalties pertaining to the alcoholic psychoses, but this continued use certainly produces a profound influence upon the brain and nervous system. Chronic alcoholization produces mental disorders of various kinds, ranging from mere alteration of conduct and troublesome or vicious behavior to the most complete dementia, with total loss of memory and extinction of intellect. Alcohol produces in others much more marked insanity, delusions of every kind (such as ideas of persecution, conspiracy and suspicion) and not only delusions but hallucinations,—i. e., false hearing, taste and smell,—likewise perverted sexual feelings and instincts. Such patients may be as dangerous as any class of the insane in their homicidal and suicidal acts.

This delusional insanity of alcoholics is much more common in men than in women. Sudden loss of memory for even the grossest event (remote or recent) is a symptom often accounted as a result of continuous abuse of alcohol.

The high pressure of our American life has in general affected women as well as men. Tippling among women was once rare and frowned upon,—whereas nowadays it is quite com-

mon, especially in our large cities. The frequency with which even respectable women may be seen drinking an anteprendial cocktail is not uncommon. The drinking American woman, already neurasthenic, is thus fostering degeneracy for the race. No pretext is now too flimsy to excuse the taking of "bracers" by many women, whose lives are spent in enervating dissipation and excitement. The shrewd "nerve tonic" patent medicine man takes advantage of the fashionable woman's appetite, and has no difficulty in selling his soul-destroying, nerve-wrecking mixtures of alcohol, morphine, cocaine and other drugs.

Alcoholic excesses may give rise to attacks of epilepsy or convulsions simulating epilepsy, and also aggravate the ordinary forms of epilepsy. This is particularly noticeable in the children of alcoholics, who have themselves acquired the drinking habit at an early age. Convulsions may occur as an equivalent of an attack of delirium tremens. In other cases the delirium may be ushered in by an epileptiform seizure. As high as eight or ten per cent. of alcoholics have such seizures, the inception being ordinarily, immediately after a debauch. There is another aspect of this phase of the subject,—the relation alcoholism bears in the moderate drinking parent to epilepsy in the child. Illustrations could be cited, where as a result of the occasional convivial habit in the parent, or on account of his becoming slightly intoxicated every night, epilepsy or other nervous diseases manifest themselves in one or more of the children.

The chances of recovery from alcoholic insanity depend upon the extent of mental deterioration. If the patients already show moral deterioration, prolonged treatment is apt to be of little avail: each time after release from hospital, the patients relapse into their former habits, becoming at last mental and physical wrecks. Cases, when taken early and submitted to an extended treatment, have a fair prospect of good recovery. While the pronounced memory defect may sometimes improve under treatment, quite frequently it does not, and it is doubtful, even with the best results of hospital treatment, if the former mental capacity is ever regained.

A Swiss physician, famous for his skill in the treatment of diseases of children, compared the progeny of ten families, in which the father, and in a few cases the mother also, were drunkards,—with that of ten sober families. The ten families of drunkards had fifty-seven children. Of these twelve died

very early of weakness; eight became idiots; thirteen epileptics; five dwarfs; five had malformations or were deaf mutes; five became drunkards with St. Vitus dance or epilepsy: only nine remained normal. The ten sober families had sixty-one children. Of these, five died quite small; two suffered from St. Vitus dance, two were mentally backward, but not idiots; fifty remained quite normal.

Experience shows that in all countries where the alcoholic habit reigns, it accounts for one half to three fourths of the crimes, a great share of suicides, of mental disorders, of deaths, of diseases generally, of poverty, of vulgar depravity, of sexual excesses and venereal diseases, and of dissolution of families. Statistics collected by several investigators show that the parents of nearly fifty per cent. of defective children were alcoholics. It is held by many psychiatrists that no other single cause of imbecility and idiocy except mental defectiveness in the parent can compare with alcoholism in the parents,—intemperance of mothers during pregnancy being thought to be particularly likely to result in mental defect in the offspring.

This paper would be incomplete without a warning as to the influence of alcohol in the instigation of immoral relations and as one of the most powerful auxiliaries of sexual contamination, resulting eventually in a certain percentage of cases, in chronic forms of mental and nervous diseases. The role of alcohol in the propagation of venereal disease has not been sufficiently appreciated, and the consideration that every repressive measure against alcohol will be of importance from a prophylactic standpoint against the spread of venereal disease, has not received the attention it deserves. A large number of men ascribe their contamination to exposure while under the influence of alcohol. "I drank too much and lost my head," is a common explanation. A large proportion of men, and still a larger proportion of women owe their initial obliquity to the influence of alcohol: perhaps more than any other agency, alcohol relaxes the morals while it stimulates the sexual impulse.

This fact should be borne in mind that venereal disease is not always the result of a life of debauchery, or of a long series of exposures, but it may come from a single exposure,—it may be the first. "The Lie of the Wild Oats is the reef on which many a youth's life has been wrecked." That the average young man sows wild oats in the present conditions of society, is indisputable; many young men who might have been orna-

ments to society have been ruined for life by wild oats sowing. It is our duty to protect and restrain the youth from his sowing "wild oats" until his judgment is at least mature, and there will not be so many "brands" to be plucked from the "burning." Doctors know the "wild oats" crop under numerous terms. Crime, inebriety, syphilis, general paresis, locomotor ataxia are chief among them. What the consultation room does not tell us, the operating table often reveals.

Taking into consideration then that from one quarter to one third of the cases admitted to our insane hospitals are due to the abuse of alcohol, or to syphilitic infection, and that these are causes of which the extension is certainly not diminishing, the facts as related are of grave importance.

In brief, *Alcoholism* should be regarded as a disease-producing vice, and a vice-producing disease. The inebriate should be regarded as a sick person. Whether or not, the inebriate was primarily predisposed to drunkenness is a secondary matter. We must take into consideration that the individual tissues and organs have been saturated and thoroughly poisoned by a powerful drug. The key-note of the inebriety problem is prevention, and the remedy lies in the physical training and education of the masses.

The science of medicine has of recent years made great strides in the relief and cure of disease, and has greatly enhanced the value of the profession to society. Improvement in treatment has been due, not to the discovery of panaceas, but to a more accurate knowledge of the causes and means for the prevention of disease.

I therefore believe that the public should have a more thorough understanding of the cause and course of alcoholic disease. In educational directions, presentation should be made of the physical basis of heredity and the noxious effects of insufficient food supply and poisons upon the nerve cells. Above all, the alcoholic poison upon the nerve cell should be impressed upon the minds of the growing children, as soon as they are able to assimilate such knowledge and not in any fantastic manner, as is so often the case. The evil frequently resulting from alcoholic stimulation, such for instance, as the dissemination of syphilis which leads to the worst and most intractable forms of nervous and mental diseases, should also be made clear. These are factors of life that cannot be overlooked and must interest all good citizens.

In conclusion, permit me to impress upon you that the strongest indictment against alcohol is that it *excites the passions and at the same time diminishes the will power*. Due to the fact that it lowers the moral tone, it does much *more* harm than all the cirrhotic livers, hardened arteries, shrunk kidneys, inflamed stomachs and other lesions caused by its excessive use.

The prevention of mental diseases due to alcohol is only part of the general movement against this enemy of the race. Excluding poverty and crime, there is probably no more disastrous result of alcoholism than the continual procession of unfortunates who are entering hospitals for the insane because of intemperance.

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TECHNICAL FACTORS IN THE SURGERY OF GOITRE.

BY

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THE prime object of this paper is to discuss with my colleagues of this Surgical Section of the County Society, some of the technical points in the operation for the cure of goitre, in order that in the exchange of views we may trace *outlines* of common accord.

My observations on goitre curiously antedate my medical training because of the great prevalence of the disease in localities where I have traveled and sojourned. I make reference to this fact, because it is noteworthy that the very same reasons which seemingly were responsible for the limited application of surgical measures to the cure of goitre in my pre-medical days, can be suggested, at the present time, as possible reasons for the widespread impression among physicians and the laity, that operations on goitre are extremely grave or even impracticable.

You will concur with me in that the operation has been gaining favor and popularity; that the work of European surgeons has led the great advancement in our present knowledge of thyroid diseases and that, in America, in the last twenty years, surgeons have added materially in research, experiment and technique to the present status of this knowledge and to the great success of thyroid surgery, so that contributions from American clinicians represent, it might be said, the last word upon this subject.

My own observations on the disease of the thyroid gland number now upwards of two thousand cases, including almost every clinical form, and on subjects varying in age from eight to seventy-five years. I have operated, up to the present time, on 447 cases which is a rather strikingly small percentage of the total number of cases I have seen. This may be accounted for by the fact that patients afflicted with thyroid enlargement are not acutely stricken, do not, as a rule, suffer progressively and have none of the features of urgent surgery of other

growths and acute inflammatory processes for which patients are daily receiving surgical relief.

The prevalent notion among goitre patients that such growths about the neck are too dangerous to remove and the effort on the part of female patients to conceal the disfiguring growth, contribute to a more *or less* degree, towards keeping down the number of cases which accept the choice of an operation.

Our routine method in the study of a case: A clear and concise history is obtained, with particular stress on heredity, occupation and digestive function as important pre-disposing etiologic factors, far more so than habitat, for high altitudes, mountainous regions, water supply, etc., are not as important as they were formerly supposed to be.

The neck is examined by inspection and palpation, in the natural position of the neck first, then in hyperextension that the gland may be forced into prominence on the anterior or lateral aspects of the neck. In the act of deglutition. I find valuable information, not only as to the lower limitations of the hypertrophy and conditions behind the sternum, but as to the mobility of the lateral lobes and freedom of the trachea and larynx, around which the thyroid hypertrophy encroaches.

As a matter of routine, the pharynx, base of the tongue and sublingual space are carefully inspected; bearing in mind the embryonic development of the thyroid body in the pharyngeal folds and base of the tongue. The eyes can readily be noted as exophthalmic or not and arteriovascular changes carefully interrogated. The heart, not only as to tachycardia, but as to valvular and myocardial changes and then, the arterial tension; the central nervous system, the lungs and renal function, obtaining the essential data, in a concise manner, make a preliminary examination complete.

If the toxic symptoms are prominent, and by that I mean, if hyperthyroidism, with or without marked glandular hyperplasia is marked, a blood examination should be recorded, for, a differential and leucocyte counts, lymphocytosis, eosinophiles and index of cachexia are of value in proposing operative interference, for as Murphy forcibly expresses it "timely operative interference in hyperthyroidism, is the safest operation in surgery; while in the advanced stage it is the most dangerous and tragic procedure."

The measuring of the circumference of the neck from two or

more anatomical landmarks, for the purpose of comparison in subsequent observation is useful, whether under preparatory treatment for operation, or to estimate the influence of medicinal action on the growth. A preparatory treatment for contemplated surgical intervention in goitre, depends entirely upon the individual indications, based upon a thorough clinical study of each case. In simple goitre, with slight or no toxic manifestations, there is no reason for preparatory treatment, but in hyperthyroidism a few days' or a few weeks' rest in bed, and such sedative or tonic treatment (arsenic, digitalis, sodium cacodylate, etc.) as may be suitable, will suffice in the majority of cases. I have never found it necessary to drill the over-anxious victim of exophthalmic goitre to the tolerance of the general anesthetic by the daily use of the ether cone with a few drops of ether to gain their confidence as practiced and recommended by some clinicians, for even in the most alarmed of my cases I would have met with objections to this plan. The anesthetic: I have operated under local as well as general anaesthesia and both, local analgesia for the superficial work followed by a short period of general anesthesia for the deeper and more complicated steps of the operation. I have never used spinal anesthesia in goitre work, for I frankly admit I should fear to attempt it. In discussing this point with an eminent surgeon a short time ago, he told me of his experience with spinal anesthesia in goitre excisions and stated that he was forced to discard that method by alarming manifestations in two of his cases. We administer, hypodermically a $\frac{1}{4}$ gr. morphine, with 1-100 or 1-150 gr. atropine sulphate, forty minutes before beginning the administration of ether. Our anesthetist, Dr. Jones, has attained a degree of skill in this class of cases, that adds materially to the safety and comfort of our work.

General considerations in the preparation of the patient for operation: The patient's neck is thoroughly cleansed with soap and water, dried, then flushed with ether, followed by alcohol and a sterile compress protects the field of operation from the night before. The morning of the operation the neck is again flushed with alcohol and sterile dressings reapplied. In the operating room, the table is slightly elevated at the head and the patient's neck made prominent by extension, consistent with respiratory freedom. The patient's face and the anesthetist's hands are thoroughly screened off from the field of operation, with this further precaution that the anesthetist is required to

be capped and gowned and wearing gloves with the same aseptic care of an assistant, in order to meet any respiratory difficulties during the operation, with little trespass on the surgeon's field and with reasonable asepsis. To consistently relieve the anesthetist from handling accessory requirements during the anesthesia, a resident physician usually stands by to assist. Emphasis upon asepsis here, is only brought to notice, as more consequential, because sepsis in thyroid work is likely to be disastrous, as infection of the remaining portion of the thyroid may lead to atrophy hypothyroidism and myxedema.

We have never used iodine on the skin in goitre work, for two reasons: First, because of Kocher's warning years ago against the use of iodine, from incompatibility with certain metabolic and secretory changes in the thyroid; although recent knowledge demonstrates that too great importance has been attached to the influence of iodine. Our second reason is that, even in diluted strength, the skin of the neck is very readily irritated by iodine.

The Incision: The choice of an incision depends upon the position and dimensions of the growth to be removed and in accord with muscular land marks and folds of the skin for best cosmetic effect. Personally, although I employ freely the Kocher low collar incision, I am partial to the Bilroth's method, especially in unilateral hypertrophy, or as we often find most convenient, a combination of Bilroth's oblique with Kocher's transverse line. The particular advantage to this plan is, greater accessibility with minimum flap dissection of skin and platysma; less need of muscular division, with greater facility for their retraction. Then, too, in this fashion we expose the upper pole of the thyroid quicker and with less likelihood of injury to the accessory veins of the external capsule, hemorrhage from which, greatly delays the delivery of the gland, blurs recognition of the superior thyroid vessels and parathyroid glandules and predisposes to phlebitis, infection and delayed union. We find most helpful and important to deliver the upper pole first, as freedom above permits of more handy rotation of the lower pole, a factor of the greatest importance, because the inferior thyroid vessels are usually more dilated and tortuous and are closer to the trachea and the recurrent laryngeal nerve. The lower parathyroids are usually larger, more readily injured and, in intrathoracic hypertrophy of the lower pole and substernal accessory thyroid bodies, can be de-

livered with greater skill, if the upper pole has been dislodged upwards and to the median line.

The manipulations incident upon delivery of the goitre, frequently embarrass the breathing and the patient shows signs of asphyxia; it is urgent, therefore, to accomplish the dislocation as rapidly as possible and with minimum trauma. It is a relief to the operator to complete this first step of the operation and to see the posterior capsule give way from the trachea permitting clamping and division of the vessels. In unilateral hypertrophy and hyperplasia, we often find that the thyroid isthmus is little, if at all, enlarged and that it can be dissected and carried off together with the excised lobe without requiring a single ligature. When, however, the isthmus is hypertrophied and very vascular, clamp-pressure, followed by ligaturing obtains the best stump, because by clamp-crushing, we prevent cutting through with the ligature and much annoyance from persistent oozing from the isthmian stump. I well remember the skillful Maydl in his clinic in Prague, beginning his thyroid excisions oftentimes by dividing the isthmus between two clamps and then proceed to enucleate the lateral lobes; while the elder Kocher systematically attacks the isthmus only after thorough exposure of the lateral lobes. An ideal extirpation of the thyroid is attained only with a minimum loss of blood and if we guard against tearing in dry-dissecting the posterior capsule, we can pick up the individual vessels with light weight hemostats, and avoid clamping and ligaturing en masse. The special value of this extraordinary care lies, not so much in the danger of hemorrhage, but in the advantages of a dry, bloodless cavity when we come to infolding of the posterior capsule and covering of the stump, before closure of the wound. It has been our aim in goiter operations to avoid division of muscles whenever practicable. If the incision is carried out in conformity with the outline of the tumor, we find that the muscles, sternomastoid, sternohyoid, and sternothyroid can be separated, but should the delivery of the gland appear difficult, either from great thickness of the muscles or from adhesions of the external capsule, as we often meet with in long standing goitres of the diffuse hypertrophic or cystic type, muscle division to provide free exposure, is a safer procedure than risk of tearing in the depth of the neck, where hemorrhage cannot be quickly checked. In dividing the muscles high up, we do not believe it necessary to clamp the muscle, but prefer to pick

up individually, any bleeding points, which as a rule are very few, rather than to devitalize the cut edges and interfere with primary union.

Drainage: At the most dependent portion of the wound we provide a small cigarette drain, or gutta percha tissue between two sutures, in preference to the use of drainage tube, which gives the patient such discomfort from suction and respiratory mobility. Drainage is particularly indicated when the posterior capsule is thick and vascular, or shreddy and soaked in colloid material from the thyroid parenchyma, for drainage will favor early resolution of all the surrounding infiltration and take care of the collateral oedema which follows the ligation of the large veins in the wound flaps. The drain should, however, be carefully protected from exposure to external sources of infection and should be removed in 48 to 72 hours; for, in protracted drainage or infection we have a factor, as Halstead and McCallum have pointed out, which may give rise to compensatory hypertrophy of the remaining portion of the thyroid. These patients are allowed to have the back rest in forty-eight hours and to leave the hospital at the end of a week or ten days.

THE ABSORPTION OF FAT FROM THE INTESTINAL TRACT OF THE ACTIVELY TUBERCULOUS CHILD.—Dr. F. W. Schultz, of Minneapolis, presented this communication. The tuberculous child needed a diet rich in fat. It was desirable to have as large a deposit of fat as possible in the organism, under any feeding conditions. It was equally desirable not to have an excess of fluid in the tissues. The former seemed to increase and the latter to decrease resistance to tuberculosis infection. Experiments showed that animals fed with carbohydrates were less resistant to tuberculous infection and those fed with fat rich diet were very resistant to tubercle bacilli. The importance of fat to the tuberculous child brought up the question of fat tolerance. In peritoneal tuberculosis the blocking of the lymphatic channels markedly diminished fat absorption. In scrofulous cases the fat absorption in the stools was found diminished. The conclusion was that a diet with most fat and causing least retention of water was the most favorable to tuberculous children.—*Medical Record*.

EDITORIAL

THE RIGHT OF THE PHYSICIAN TO DISPENSE DRUGS.

So many years have elapsed since Hahnemann was driven out of Germany by the pharmacists because he dispensed his own medicines, that the incident has been forgotten by most physicians. In this country physicians have so long had the undisputed privilege of dispensing their own drugs when they desired to do so, that they have become imbued with the idea that this ancient privilege would never be questioned.

During recent years, however, the movement has been growing among certain associations of pharmacists, to secure the enactment of laws that would forbid the dispensing of drugs except by a licensed pharmacist. That the time has come when the medical profession will be compelled to give serious attention to this matter, is evident from the fact that as a result of the active campaign that has been carried on, certain legislative bodies have already declared themselves in favor of such a law, and those who are commercially interested in its passage, have been able, by certain ingenious arguments, to convince a large number of the laity that such legislation would be conducive to the public welfare.

The argument that has found most favor with the public is based on the dispensing of narcotic drugs. Those who desire to make it compulsory for drugs to be dispensed only by druggists on a prescription from a physician, contend that this is the only way to prevent unscrupulous physicians from dispensing cocaine, morphine and other narcotic drugs to persons who are victims of the drug habit. They also contend that a written prescription on file at the druggists is the only means of proving incompetency or negligence on the part of physicians where injury to the patient results from the administration of drugs. The Editor of *The Western Druggist*, who apparently has the backing of a large number of retail druggists, in referring to the dispensing of medicine by physicians, says,—“The time has come to demand that the medical diploma shall be limited to its proper privilege, namely, the combating of disease and of prescribing for the sick. Will the N. A. R. D. continue to talk about ‘more cordial relations,’ to sibilate

sweetly about the naughty dispensing doctor and tremble with joy for his friendly nod, when its voice should be lifted in thunder and its battle axe be lifted in determined defiance." "When the doctor does his own dispensing, no one but the doctor knows what the patient gets."

It will be seen from these remarks that the medical profession will be called upon in the very near future to combat a strongly organized effort to deprive the physician of his long established right to dispense his own drugs. It is unquestionably true that practitioners of the homeopathic school would be injured by the passage of such a law to a greater degree than would be the members of the dominant school of medicine. It is also true that the individual homeopathic practitioner could do but little to prevent the passage of such an act by the legislative bodies. The only way that such pernicious legislation could be successfully combated would be through the efforts of our state and national organizations. We do not doubt for a moment, but that the right of the physician to dispense drugs would long ago have been abolished, but for the fact that our state and national societies have stood firm in protecting the rights of the physicians in this matter.

The point we would like to impress on every homeopathic physician in Pennsylvania, and in every other state, is that the privileges he enjoys at the present time were largely obtained and can only be safe-guarded by organized bodies.

Were the question of the right of the physician to dispense drugs the only issue at stake, it would be the part of policy and of wisdom for every homeopathic physician to immediately identify himself with and to co-operate in the work of our state and national homeopathic societies.

G. H. W.

MEDICAL SCHOOLS AND MEDICAL STUDENTS.

It is interesting to note that recent statistics show that during the past ten years there has been a decrease of about 35 per cent. in the number of medical colleges and in the number of medical students. In 1904 there were 165 medical colleges in the United States with an attendance of 28,142 students. In 1914, there are 101 medical colleges with 16,502 students.

The reason for this fall-off in the number of medical students has been twofold. First, and probably the most important factor, has been the elevation of the standard of medical educa-

tion. This has made it difficult and almost impossible for proprietary colleges conducted for profit to continue in the field of medical education. The expenses attendant upon the equipment of modern laboratories, the securing of full time salaried professors and the increased length of the medical course, have made medical education so expensive that the college is compelled to spend about twice as much on the education of a student as it secures from him in income from fees.

The second factor that has tended to divert prospective medical students into other fields has been the greater opportunities for advancement, from a financial standpoint, in other fields of effort.

When we realize that the annual gross income of the average physician amounts to about \$850.00 per year, we can see there is but little to induce a young man to spend six or eight years fitting himself for the practice of medicine. The small earning capacity of the average physician is, no doubt, traceable to the fact that there are from two to three times as many physicians in this country in proportion to the number of inhabitants as there are in European countries. This does not take into account practitioners of osteopathy, Christian Science, chiropractic and non-medical practitioners of various cults that are found everywhere. While these latter practitioners have probably not interfered to any serious degree with the income of physicians practising in rural districts, their activities have curtailed very largely the income of the physicians practising in cities. We are informed on good authority that the popularity of Christian Science and of drugless methods of treatment has reduced the income of the physicians in Boston almost fifty per cent.

Despite the decrease in the number of medical graduates, there seems little likelihood of there being any danger of an undersupply of physicians for many years yet to come.

Approximately 2,000 physicians die annually. The number of new graduates during the past year was approximately 3,600 or nearly twice as many as were lost to the profession from death. Fortunately the public, as well as the profession, are now aware of the pernicious effect of crowding the profession with incompetent men who are unable to earn a respectable living and it is quite generally recognized that the demand to-day is for better trained physicians instead of a large oversupply of poorly educated doctors.

G. H. W.

GLEANINGS

A COMPARISON OF THE ACTIONS OF CHLOROFORM AND ETHER ON THE BLOOD-PRESSURE.—Writing in the *Lancet* of February 28, 1914, Fairlie sums up the effects of the two anesthetics on the blood-pressure as follows:

(a) Chloroform. A fall of pressure is produced throughout the administration of chloroform. With the establishment of full anesthesia this fall amounts to at least 10 mm. and sometimes considerably more; along with this the pulse beats slower and a varying degree of pallor is present. Surgical shock during chloroform anesthesia produces a slight further fall of pressure. With the withdrawal of those two depressants—chloroform and shock—the blood-pressure exhibits a tendency to rise rapidly, and very often soon reaches a point a few millimeters below the patient's normal.

(b) Ether. Little alteration of the blood-pressure is produced by ether. It may cause a rise, it may maintain a constant level, or it may cause a fall. It causes more rapid and more forcible cardiac action, with dilation of the smaller vessels (as evidenced by the flushing which occurs), the latter probably counteracting the former in maintaining the blood-pressure level almost constant. With intercurrent shock a considerable fall of pressure takes place, a fall almost equal to the combined effects of chloroform and shock. The subsequent recovery after severe shock is slow, some time elapsing before the blood-pressure approaches the normal level.

WHAT SIGNIFICANCE SHOULD BE IMPUTED TO SMOKING IN ESTIMATING THE DURATION OF LIFE. In the theory of life insurance there is no concern as to smoking or nonsmoking. As a rule there is no question about smoking upon the application blank. Nevertheless in the individual case the prognosis as to the use of tobacco often plays a serious role, when the examiner finds something which might represent the action of nicotine.

The point of view varies much, some regarding tobacco as a race poison from all angles, while others look upon it as harmless when used in moderation. Among the former are those, for example, who ascribe the downfall of the Spanish race to incessant smoking.

We know that millions of men use tobacco without suffering any apparent harm. On the other hand we frequently encounter cases of tobacco poisoning due to abuse of smoking. Individuals react in different forms to the latter. One complains of headache and vertigo; another

is anemic; a third is nervous, irritable, and soon fatigued; a fourth has a tobacco heart; a fifth has amblyopia, etc., etc. Especially pronounced are the effects of the drug when smoked in cigarettes in childhood. Hence it is not only the quantity smoked, but the individual reaction which must be considered. In this regard tobacco ranks with alcohol and coffee.

We should not discuss the ill effects of tobacco alone, but also the smoker. He may use spirits or drugs, or may be subject to business cares which are aggravated by over-smoking.

Finally tobacco is one of the great creature comforts, acting, according to circumstances, as a sedative or stimulant to the mind and with little influence on the emotional sphere. No serious attempt is made to calculate any alterations of the expectation of life due to tobacco.—*Blätter für Vertrauensärzte der Lebensversicherung.*

PROGNOSIS.—W. Hale White, *London Lancet*, quotes Hippocrates who said: "The best physician is the one who is able to establish a prognosis." In tuberculosis anorexia, vomiting, and diarrhoea are very bad signs, especially if persistent; indeed, loss of weight from any cause is bad. A persistently rapid pulse, continued pyrexia, and frequent profuse sweats are all bad, but it is surprising how some of these symptoms may persist for a long time, and yet return to normal. In heart disease, generally speaking, the louder the murmur the better, for it means that owing to the vigor of the cardiac muscle the blood is being sent forcibly through the diseased valve. An irregular pulse is not so often of bad prognostic significance as a rapid one. In lobar pneumonia a most important circumstance is the age of the patient. Pneumonia is chiefly fatal by the action of the toxin on the heart; a very rapid feeble pulse of poor volume is always very serious. If sufferers from pneumonia sleep badly they do as a rule badly, and if they sweat much apart from the crisis they do badly, probably because the sweating indicates severe infection. An important circumstance in the prognosis of chronic interstitial nephritis is the age of the patient. Young subjects with chronic granular kidney rarely if ever do well, and almost anyone under thirty who has it will soon die. The sufferer from this disease who complains of general weakness does badly, so does the patient who is thin and pale, and if a patient takes to bed because of weakness he will not live long. In cerebral hemorrhage the following point to a fatal result: (a) Coma still present at the end of 24 hours; (b) Cheyne-Stokes breathing as a result of the hemorrhage; (c) much mucus in the lungs; (d) paralysis of all four limbs; (e) a very low temperature; and (f) a very high temperature. Diabetes is a disease of great interest from the viewpoint of prognosis. In the first place it is a racial disease, being terribly common among the natives of India; it is commoner in Jews than in Christians. Quite apart from race, however, it is a family disease. The most important thing about the prognosis of diabetes is the effect of treatment; it is possible to know beforehand whether a patient is going to respond easily to this. The other important thing is whether the sufferer is going to live in easy and comfortable circumstances. One cannot possibly tell whether a treatment is good or bad unless one knows what

the natural course of the disease is. A study of life insurance statistics clearly shows that the mortality from any disease increases in proportion as the abdominal girth of the patient over that of the expanded chest increases. It is well known that overindulgence in alcohol greatly damages the prognosis in any disease. Lastly, there is the mental factor: every doctor dislikes the patient with an acute illness who is sure he will die, and likes the patient who is certain he will recover.—*Medical Record*.

TREATMENT OF PULMONARY TUBERCULOSIS BY THE INDUCTION OF ARTIFICIAL PNEUMOTHORAX.—The treatment of pulmonary tuberculosis by means of artificial pneumothorax, although of recent date, has obtained a well-defined foothold as a therapeutic measure among those who are making the treatment of this disease their life work. It is true that this mode of therapy is limited to carefully selected cases but the results in such instances have been nothing short of brilliant. (James S. Ford, *Medical Record*, May 2, 1914.)

Having determined the most resonant area over the diseased lung, this site is selected for the injection. It is best at the beginning to administer $\frac{1}{4}$ grain of morphine and $\frac{1}{150}$ grain of atropine to quiet the nervousness and fears that may be present in the invalid. The patient is placed on his good side in bed with a pillow so placed under him as to widen the intercostal spaces. The area chosen is then painted with tincture of iodine following which the skin is anesthetized with a $\frac{1}{2}$ to 2 per cent solution of cocaine or with novocaine and adrenalin solution. After the skin has been so treated, the needle is withdrawn and introduced at right angles to the body. It is slowly pushed inward, each layer of the chest wall being anesthetized, down to and including the pleura. The skin is then pinched up between the thumb and forefinger, incised with a tenotome and the blunt needle is pushed slowly through into the pleural space.

For the initial dose 200 to 500 c.c. should be sufficient, but this cannot be made an absolute rule. As the gas is being given to overcome some symptom the accomplishment of this must be the guiding factor for the determination of the amount. The chest should be refilled in three to ten days, for if allowed to go much longer, all the gas from the initial injection will have been absorbed and such dense adhesions will have formed as to entirely obliterate the former free space.

The ideal case for the induction of artificial pneumothorax is a patient having one side diseased and progressive, febrile or afebrile, with or without cavity formation and an opposite healthy side. It is fair to say that this condition but rarely appears.

Tuberculous enteritis as a complication to the pulmonary type does not strictly speaking constitute a contraindication, but no beneficial results have been seen in cases treated with gas where both have existed. Laryngeal tuberculosis is not a contraindication for though the gas has no direct effect upon the laryngeal process, it indirectly produces benefit by diminishing the amount of irritating sputum that would pass over the lesion.

Effusions may occur immediately following the first injection or

come on months after the treatment has been discontinued. It differs from the ordinary pleural effusion in that there is no tendency to be absorbed by the pleura. It must be aspirated and the longer it persists the thicker it becomes. Where effusion has occurred, it is necessary to draw off the fluid before the gas can again be given.

A secondary infecting organism as a streptococcus, pneumococcus, or influenza bacillus may become engrafted upon the effusion through the blood stream and this serves as an excellent culture medium with a resulting empyema. In this case surgical treatment must be availed of.

In cases with so-called deep or concealed lesions in the better lung it is possible that the compression treatment may light this up and cause a rapid extension of the tuberculosis on this side. The same may even occur, when there are signs of an arrested process in the good lung. Röntgenograms made of the case before treatment with a careful interpretation of the plate should go a great way in helping to obviate the danger.

The results of this form of treatment in carefully selected cases have been brilliant. It must, however, be recognized that the field at best is limited and it will never be much broader than at present. There is almost an instantaneous diminution in the amount of expectoration, a rapid drop in the number of tubercle bacilli from the sputum, a quick fall of the temperature to normal or nearly so, and hemorrhage is at once arrested. The percentage of cures from now on will undoubtedly be greater as the treatment will be given to earlier and more favorable cases. The age of the patient need hardly be considered in giving this form of therapy. It can now be safely said that after the compression treatment has ceased, the lung so treated does resume its normal functions to a greater or less extent, depending wholly upon the amount of disease present at the beginning of treatment. In a lung with cavity formation and a great deal of disease scattered through it, very little in the way of function can be expected from it when allowed to expand again.—*Med. Rev. of Reviews.*

THE MEDICINAL ACTION OF FOODS.—We find some interesting suggestions as to the therapeutic possibilities of foods. Thus, for instance, according to Buckland, onions, eaten at night, promote sleep, produce perspiration, and have a diuretic action. They are good for coughs and colds and an aid to gastric digestion. They are also credited with allaying the pains of rheumatism. These properties of the onion are ascribed by the writer to the sulphur contained, in the form of its sulphureted oil, the allyl sulphide.

The turnip, parsnip and rutabaga contain a peculiar oily principle, which may account for their traditional value as aperients and diuretics, while their juices are an old-country remedy for coughs and hoarseness.

It is not alone that the potato possesses decided nutritious value, but it also contains several potent principles, among them solanine, which is credited with diuretic and aphrodisiac properties, and known as a powerful yet safe nerve sedative.

Cabbage contains a sulphur compound, which may account for its

alleged value in the treatment of scurvy and scrofula. Spinach acts as a laxative, and it also contains a peculiar principle, as well as considerable iron in organic form. The tomato contains a principle which, when taken in concentrated form, produces salivation and acts as a hepatic stimulant. On this account it has been called "vegetable mercury," and we are assured by *The Lancet* that "an official tincture of it is prepared in America" just in what pharmacopeia "tincture-solani lyco-persici" is "official."

Carrots also are said to have a cholagog action; and this humble vegetable is served at certain health-resorts to patients suffering from derangements of the liver. Carrots have also been used as a local dressing, for the relief of pain. This vegetable contains a neutral principle, known as carotin, and a volatile oil, which may explain its traditional curative qualities.

As *The Lancet* points out, many of our common vegetables contain definite active principles, so that the kitchen may reasonably be rated as, to some extent, a dispensary of medicine as well as of foods.

It need hardly be added, of course, that the foregoing remarks apply, not exclusively to the edible parts of the respective plants, but more or less to other portions, not utilized; or, also to the vegetable at some peculiar (sometimes irregular) period of its development.—Editorial in *The London Lancet*, extracted in *Charlotte Medical Journal*.

CHRONIC DIARRHEA AND CONSTIPATION.—Schmidt, writing in the *Medical Record* of February 14, 1914, states that although it is often said that one should not give a prescription before carefully studying each single case, one cannot always get a clear conception of it without at least once emptying the bowels. The following is the procedure Schmidt has adopted in this class of cases:

First, forbid the patient to take any more purgative and put him on a common mixed diet. If after the last defecation thirty-six to forty-eight hours have elapsed, examine the rectum with the finger. If it is entirely filled with large quantities of feces and no obstacle is to be made out, we have to deal with a case of functional dyschezia, which has to be treated by enemas. If the rectum is free, or only small residues of fecal matter are present, order the patient to take twice a day a suppository of a fair amount of extract of belladonna, and to lie down, or at least to rest, several hours during the day. If he complains of colicky pains, hot compresses must be applied. Wait several days without troubling about the complaints of irritability, headache, unclear brain, inability of thinking, etc., which are often made by neurasthenic patients. Only once a day the rectum is again examined. If the feces reach the rectum but are not expelled, the case is to be regarded as a combination of functional obstipation with functional dyschezia. More often, one may dare say in the majority of cases, the stool comes by itself in this period of waiting, the mass being in no way hard or thick, but weak or pressed into small cylinders as a sign of spastic complication.

Different from this, the patient afflicted with the atonic form of constipation, if not neurasthenic, often does in no way feel uncomfortable during four six and eight days or more though the feces have not yet

passed into the rectum. If we now administer a large enema or give a purgative the patient has a stool consisting of big hard balls which are generally free from mucus and do not exhibit signs of progressive decomposition.

Of course there are mixed forms depending on the fact that only a very few cases are free from interfering spasms. As to the details of the single case the rectoscopy and radioscopy sometimes were interesting peculiarities.

As regards the treatment spoken of, it may be inferred from the above facts that the combination of a mild laxative with the application of small quantities of atropine is in most cases the very best kind of medication. But drugs being not the ideal treatment of constipation we try to dispense with them. The best way to reach this result is indicated by the different branches of physiotherapy which are indicated in all conditions except the mere spastic forms.

It will not be necessary to enumerate all the methods applicable but Schmidt asserts he cannot omit mentioning that according to his experience massage is by far the most efficient of them. It should be performed in the beginning by the physician himself. Drinking mineral water in Carlsbad, Kissingen, and Marienbad, which is often efficacious during the stay in the place itself, may later on turn out to act in a contrary manner, inasmuch as too large doses of the mineral water have been taken and physio-therapeutical methods have not been combined with them. The purpose of the cure is to increase the stimulus for peristalsis, resulting from the intestinal contents, only to such a degree as is necessary to set free the reflex. By this method and by improving the circulation of blood in the bowels with massage, little by little the balance of innervation, which has been lost, must be restored. Even in the same way the dietetic treatment has to be directed.

One may be surprised that Schmidt has not yet spoken of the constipation diet, which for most patients and also for a large number of physicians is the main point of the whole question. Schmidt asserts that though he should not hesitate to order the so-called constipation diet—consisting of vegetables, nuts, fruits, brown bread, and other cellulose-holding substances—in cases showing no spasms, he is not convinced of its utility, because it generally has already been tried in vain by the patients themselves before calling for our help. It can easily be demonstrated that the power of digesting cellulose is increased in these cases to an astonishing extent. Thus nuts, the peel of apples, pears, and even the chitin-structure of mushrooms, which commonly is indigestible, do not reappear in the stool. This fact must be considered as a constitutional factor, not as a pathological one, but as a physiological one. It is the one extreme of the gift of digesting cellulose, the other being realized in the inclination to intestinal fermentation mentioned above. It is owing to this fact that the intestinal contents of the patients suffering from atonic constipation are digested to such a degree as to leave only small and non-putrefying feces. There is no reason, therefore, to change the common mixed food. If we will enlarge the quantity of the feces and give them a more pulpy consistence we must rely on such substances, which in no way can be dissolved and retain their soft consistency while

passing the intestines, whether these substances are prepared of liquid paraffin, agar-sugar, or similar material. In all cases, where spasms are present, a weak, non-irritating food, free from cellulose, should be given.

As to the enemas the condition in which they are indicated is dyschezia. Of course, if the stool lies in the rectum and cannot be forced out, it is nonsense to give a laxative or a massage of the abdomen. Here enemas of non-irritating substances may be regularly applied every second day without scruple. They work only by mechanically distending the rectum. Besides, enemas should be ordered only for the purpose of emptying periodically the colon in primary atonic constipation. In the same manner there act single doses of purgatives, which should not be entirely banished from the treatment. General relaxation of the body often has a good influence not only in removing neurasthenic complications, but also in strengthening the activity of the intestines. Moreover the patients have to be taught to notice the least call for defecation. Schmidt asserts that although he does not belong to the fanatics of suggestive treatment, he highly esteems the value of instruction and education in all patients suffering from functional constipation.—*Therap. Gazette*.

PROGNOSIS AND DIAGNOSIS OF CONGENITAL CARDIAC DISEASE.—Dr. Charles Hunter Dunn, of Boston, in this paper, dealt with special studies undertaken in Vienna in an obstetrical division of a large hospital. The study covered about forty cases. The diagnosis of these cases was difficult clinically. The text-books were misleading in treatment of the subject. His conclusions were often made in spite of the literature. Many statements made by men of high authority were not found to be justified. Several lesions together were often confused with a single lesion. In the cases studied diagnosis was confirmed at autopsy in forty; eight additional cases were found where the physical examination gave no hint of cardiac lesion, and in four cases a diagnosis was made and the autopsy showed a normal heart. Cases included open foramen ovale; pulmonary stenosis; deficient ventricular septum; patent ductus arteriosus; congenital malformation of pulmonary artery. Open foramen ovale by itself had little clinical significance. Pulmonary stenosis was the sole lesion in sixteen cases; all these babies died under three weeks and were all blue babies. Where they survived this was not the sole lesion. In all forty cases a systolic murmur was present. Enlargement was found to be an essential sign in pulmonary stenosis. Open ductus arteriosus was found to be a help when combined with pulmonary stenosis and not a hindrance to the circulation of blood from the right heart to the left. In these cases a murmur was always found to be transmitted to the neck. A case of murmur without cyanosis or enlargement was always open ductus arteriosus alone.—*Medical Record*.

A PRELIMINARY REPORT ON A METHOD OF TREATMENT FOR DIPHTHERIA CARRIERS.—Although I have been able to observe only a small number of cases, I have been prompted to report this method for the treatment of diphtheria carriers because of its apparently great value. The method consists in thoroughly spraying the throat with a solution varying in

strength from $\frac{1}{4}$ to 1 per cent of the usual 40 per cent formaldehyde solution. The patient's throat is sprayed one hour before, or two hours at least after the ingestion of food or fluid. The spray is usually used every three or four hours except during sleep. The throats were sprayed daily and cultures taken from five to eight hours after the solution had been used. When the throat became free from bacilli, later confirmatory cultures were made. Because formaldehyde acts better upon organic material when used warm or almost hot, the solution used in our last five cases was warmed in a corked bottle before use. It was freshly prepared daily. In general I would advise that one begin with a solution of $\frac{1}{4}$ or $\frac{1}{2}$ per cent made up from 40 per cent formaldehyde. When necessary, the solution can be increased to one per cent and be less frequently applied. Three, four, five or even six days of treatment may be required, but there should be persistence in the treatment. The urine should be examined daily so as to discover any effects on the kidneys. In none of the cases which I have treated has there been any evidence of any renal irritation. In the series of cases observed thus far no case failed to become diphtheria-free except one which was not treated under the author's supervision.

The procedure which I have suggested is a simple one and does not produce any untoward symptoms. It will be of interest to determine whether the spray suggested in this communication will influence the clinical course of diphtheria, and also whether the accessory sinuses can be cleared of diphtheria bacilli by its use. Because of the good results obtained in the series of cases here reported, I would suggest the use of the spray in acute cases of diphtheria in which antitoxin has already been administered, also its prompt use in cases where antitoxin is for some reason or other withheld temporarily or permanently.—H. R. Miller,

THE CLINICAL EFFICIENCY OF PHYLACOGENS.—Concluding an article, Jarboe, in the *Virginia Medical Semi-Monthly* says he thinks we are justified in believing that there is considerable therapeutic virtue in the phylacogens. He is pleased to adopt them for use in his practice because he is convinced that he has thereby added to his therapeutic armamentarium an exceedingly hostile foe to the gonococcus and to other infections.

FORMALDEHYDE.—McGuigan in the *Journal of the American Medical Association* of March 28, 1914, states that formaldehyde is rapidly absorbed from all parts of the gastrointestinal tract and lungs, and may be excreted again by them. It is rapidly oxidized in the body to formic acid and carbonates. There is also a small amount of dialyzable compound formed in the blood, which is most probably hexamethylenamin, since the latter is found in the urine (bromine test).

Small amounts of formaldehyde may pass through the body without causing apparent inflammation, while larger amounts always cause some.

Recovery from severe inflammatory reactions may be rapid and apparently complete.

Formaldehyde depresses the heart by direct action. Its action on respiration is transient and apparently the result of irritation, though the quick oxidation would account for some of the increase.

THE FUTILITY OF PHENOLSULPHONEPHTHALEIN AS AN INDICATOR OF RENAL FUNCTION.—Ware (*New York Medical Journal*, February 28, 1914) summarizes an ingenious article on this subject as follows:

The efficiency claimed for the drug because of its complete rapid elimination and its reappearance in an unaltered form cannot bespeak any elaboration in the sense of work done on the part of the kidney, for this is denied by the very definition of efficiency which represents the ratio of useful work to energy expended.

The dye output can be estimated colorimetrically.

The interpretation of the colorimetric reaction is the issue.

Evidence adduced favors its being an acido-metric test, but without any claims of parallelism existing between the degree of acidity and kidney function.

Its non-irritating nature, non-toxicity, smallness of dose, titled as virtues (Geraghty and Rowntree), are but of the negative variety.

As for the information being accurate and precise, this is controverted by the theoretical, chemical, experimental and clinical evidence herein set forth, and which forbids reliance on the extravagant claims of phenolsulphonephthalein as a functional kidney test.

In closing, the author asks: Why, if this twentieth century product is so all-sufficient in the diagnosis and prognosis of nephritis, should its great utilitarian advantages have been overlooked by insurance companies and failed of adoption, unlike the blood-pressure test, which stands high in the estimate of most companies in adjusting their risks?

SYPHILIS AND PARTURITION.—Lobenstine (*American Journal of Obstetrics and Diseases of Women and Children*, March, 1914) thus summarizes a paper on this subject:

All mothers suspected of a specific taint should have the blood examined for spirochaetae.

All mothers with a positive reaction, even though without symptoms, should receive energetic treatment; such treatment should consist in the use of both arsenic and mercury.

Every woman who has at any time shown a positive reaction should have her blood periodically examined during the child-bearing period; for in this way alone can the most permanently good results be obtained for the offspring.

All suspected fathers should have the blood examined, and those with a positive reaction should be forced to undergo active treatment.

The care of the child after birth: All children born of suspected parents, or of parents who have given a plus Wassermann reaction, should have their blood examined soon after birth. They should receive active treatment, whether with or without symptoms, in the presence of a positive reaction. The author would go further than this and advise treatment even in the absence of a positive Wassermann, should the parents have been positive to syphilis. Thorough treatment of the mother during pregnancy does not lessen the necessity of treating the child after birth.

Indirect treatment of the nursing child through the mother's milk, by active treatment of the mother, is uncertain. The child should be treated preferably directly with arsenic and mercury.

Small doses of arsenic given intravenously at intervals varying from a few weeks to several months, supplemented by prolonged treatment (that is, six months to a year) with mercury in the form of inunctions, will without doubt offer to the little patient the greatest hope of health and happiness, and freedom from the scourge of syphilis.—*Therap. Gazette.*

SOME OBSERVATIONS ON THE USE OF MASSIVE DOSES OF ANTITOXIN.

Woody writes on this theme in the *Pennsylvania Medical Journal* for February, 1914:

The doses Woody recommends on the basis of his experience are as follows: No case of diphtheria, however mild, should receive less than 10,000 units. Both tonsils well covered with exudate, of first or second day duration: 40,000 units. Both tonsils well covered with exudate, third day or thereafter: 75,000 to 150,000 units. Both tonsils, with uvula, palate and nose: 150,000 to 300,000 units. Nasal, simple cases: 20,000 units. Nasal, with marked symptoms of toxemia: 50,000 to 150,000. Laryngeal: 30,000 to 45,000.

For laryngeal cases, associated with any of the above varieties, the doses should be gauged accordingly.

The results he has noted, compared with results in cases which have received smaller doses, are as follows:

1. Much more prompt disappearance of the local sign of the disease—i. e., the membrane. With the use of large doses we do not have a period of anxious waiting to determine whether or not a result has been achieved. Yet in severe or obstinate cases he does not hesitate to repeat as often as necessary the primary dose, even if it has been a very large one. At times he has found it to be an advantage to gauge roughly the amount of antitoxin that would appear necessary, and to give it in a number of doses within a stated time, say twenty-four hours. Such spaced doses do not give the reactions caused by doses repeated at longer intervals.

2. The use of large doses more quickly overcomes the toxemia of the disease, so that coincident with the change in the disease locally we have a marked improvement in the patient's general condition, which is noticeable in a very few hours.

3. Late complications are lessened in frequency and severity. The use of massive doses, to a large extent, does away with those cases in which an apparent cure is followed by a return of dangerous and fatal symptoms. The rapid cures that result from the use of large doses are real and not apparent. It has been stated by some that large doses of antitoxin can neutralize in some measure toxic products already in combination with the tissues, but this is still open to question.—*Therap. Gazette.*

THE TREATMENT OF ACNE.—In the *Clinical Journal* of April 29, 1914, Sibley writes on this topic. He believes that internally sulphur is often a good remedy. A teaspoonful of powder consisting of equal parts of flowers of sulphur, neutral tartrate of potash, and sulphate of magnesia taken in milk the first thing in the morning is a serviceable but not very palatable combination. Sometimes arsenic, especially in anemic types of

girls, iron, strychnine, phosphorus, mineral acids, or cod-liver oil are indicated.

Locally plenty of friction with soap and water on a flannel is of importance, together with anything which tends to produce hyperemia of the parts, such as steaming and massage. The application of Bier's suction or exhaustion cups for a few minutes will often be found very efficacious not only for improving the general circulation in the part, but more convenient of application than many of the older methods of expression of the pustules with a watch-key or some modification of this instrument.

Locally, lotions are frequently more efficacious than powders or ointments. Lotions containing sulphur are those usually employed, such as sulphur præcipitat. gr. lxxv, spirit. rectificat. m. lxxv, aquam rosæ q. s. ad f3j; misce, fiat lotio. Or sulphur. sublimat. gr. xv, spirit. rectificat. and mucilag. tragacanth 33 m. xv, liquor calcis f3ss, aquam rosæ, q. s. ad f3j; misce, fiat lotio. The production of a certain amount of local irritation is often necessary, especially in chronic cases. This may be brought about by a 5- to 30-per cent bassorin of resorcin made as follows: Tragacanth. parts 5, glycerini parts 2, aquæ parts 93, to which is added resorcin 5 to 30 per cent. This jelly is well rubbed into the part at night and washed off the following morning. The process is repeated every night with gradually increased strengths of the preparation until some local reaction shows itself, and while this is occurring a little calamine lotion should be applied from time to time. Other methods for producing some local reaction are by applying plaster mulls containing salicylic acid or resorcin, the former often combined with creosote. The strength of these plasters varies from 5 to 40 per cent. A good plan is to apply one of the plasters of a suitable strength, according to the chronicity and amount of induration present, at bedtime, and to remove it the following morning. The process is repeated every night until sufficient reaction has been obtained, when the application should be omitted for a day or two according to circumstances. Having by one of these means obtained sufficient local reaction, some simple sulphur and salicylic acid ointment or lotion may then be applied.

Vaccine treatment is often if not always useful as an adjunct to local treatment, but to be of permanent value this must be continued for some weeks after the cure is apparently complete, to prevent relapses. The majority of cases do best with a pure acne bacillus vaccine, and it by no means follows that because there is much pustulation, and therefore presumably secondary staphylococcus infection, that a vaccine of this bacillus is indicated. If the acne vaccine by itself fails to produce satisfactory results, then it is always advisable to add some staphylococcus vaccine. The doses of these vaccines are as follows: The acne usually five millions to begin with, gradually increasing up to 100 or more millions. The staphylococcus commences with 100 millions, increased up to five or ten billions.

Severe cases of acne often do better under vaccine treatment than comparatively mild ones; the most resistant to this treatment are usually those with abundant seborrhea, many comedones, and scanty foci of supuration. Vaccine treatment must be continued for six months at least,

and long after all spots have ceased to appear, when diminishing doses at longer intervals will often prevent relapses and complete a cure.

In the majority of cases repeated small doses of x-rays will bring about a satisfactory cure, even when all other treatments have completely failed. A third of a Sabouraud's pastille dose repeated at the end of a week, and then after fourteen days, is the system found to agree best in most cases, after which it is often desirable to keep up the effect of the rays for a considerable time, at three weeks' to a month's interval, between applications. If these doses be rigidly adhered to there cannot be any risk of producing an x-ray dermatitis or other secondary phenomena when the cases are carefully selected. It would not, for instance, be desirable to recommend this treatment to a woman with a tendency to a growth of superfluous hair on the face, or to one with a naturally pigmented skin, as in both of these conditions the deformity originally present might, and probably would, become exaggerated, and the cure of the acne would be associated with an increase of the hirsutes or of the pigmentation, or both.

High-frequency currents are curative in some cases; the gentle hyperemia produced by the application of the vacuum electrode is often of great assistance in the treatment of obstinate cases.

The electrical hot-water bath with a constant current is very useful for the treatment of acne about the body, such as on the shoulders or chest, a little chloride of sodium being added to the water; so also a roller electrode with a galvanic current applied over the skin will be found very serviceable in the treatment of ordinary cases.

Electrolysis with the negative needle inserted into the more indurated or chronic pustules, with a current up to a milliampere for a few seconds, is a useful method of cutting short a chronic suppuration; this diminishes the liability of scarring, and may be repeated over considerable periods of time in very indolent cases.

Indurations and scars left from old-standing attacks of acne may be much diminished and improved by treatment with Bier's suction cups. One of these of a suitable shape and size should be applied daily for some five minutes to the area of depressed scarring, care being taken not to apply the glass too vigorously or some bruising of the tissues may result, which, though of only a temporary nature, is undesirable, especially in sensitive subjects. As a rule an exhaustion just sufficient to cause the cup to adhere is sufficient. The prolonged treatment of depressed scars by this method tends to diminish the depression, and bring the scar to a level with the surrounding skin, and at the same time the hyperemia resulting will improve the general condition of the skin and subcutaneous tissues.—*Therap. Gazette.*

LOW BLOOD-PRESSURE.—Cornwall, in the *New York Medical Journal* of March 7, 1914, says from his observations on low blood-pressure it is possible to draw a few conclusions, positive or tentative, as follows:—

1. A low systolic pressure, provided the diastolic pressure is correspondingly low, does not necessarily mean poor circulation, although it does imply a diminished reserve power of the circulation.

2. A low systolic pressure with a comparatively high diastolic pres-

sure, and a consequently small pulse pressure, usually means myocardial weakness with chronic nephritis, arteriosclerosis, or arterial spasm, and may be bad prognostically.

3. A low diastolic pressure with a comparatively high systolic pressure, and consequently an excessively large pulse pressure, may mean several things—*e.g.*, a purely functional condition, a compensated aortic regurgitation, myocardial degeneration without arteriosclerosis or nephritis, toxemic irritability of the myocardium, or vasomotor dilation from any cause.

4. The diastolic pressure seems to be more stable than the systolic, and to show, less often than the systolic, marked variations from its normal without definite pathological cause; and the systolic pressure seems to accommodate itself to the diastolic more easily than the diastolic to the systolic. The diastolic pressure indicates the peripheral resistance, which in many cases is determined by permanent pathological conditions. Movements of the diastolic pressure beyond the normal health range cause the pulse pressure to take on an overload if an adequate circulation is kept up.

5. Vasodilator drugs may improve the circulation by increasing the pulse pressure.

6. Cardiac depressant drugs may lower the diastolic pressure by diminishing the systolic force and calling for a pulse pressure overload.

7. Toxemias, both acute and chronic, can produce low blood-pressure by dilating the blood-vessels and by weakening the myocardium, but the greater part of their effect in the larger number of cases is probably produced by vascular dilation, either through the vasomotor center or locally.

8. Chronic tobacco poisoning is a very common cause of persistent low blood-pressure.

9. It is possible for a patient to live for several hours with a systolic pressure below 60, and for several days with a systolic pressure below 70, and to walk around without particular symptoms of circulatory distress with a systolic pressure of 90, provided the pulse pressure is sufficiently large.

10. The pulse pressure in health usually ranges between 30 and 45; and pulse pressures as small as 20 or as large as 60, if persistent, may be considered pathological.

11. A systolic pressure of 100 or lower in an adult usually calls for treatment.

12. Shortly before death partial asphyxiation may cause a sudden, transient rise in the blood-pressure.

13. A fall in the systolic pressure in response to an exercise test, immediately, or after a short preliminary rise, and a delay in its return to the normal, while lacking positive significance, suggest the existence of myocardial weakness, as does also a failure of the pulse pressure to show a substantial increase in size in response to such a test.

14. The neurotic factor in the patient and the personal factor in the observer may require a considerable allowance to be made for them in the

interpretation of blood-pressure findings; and the clinician must constantly guard against being misled by blood-pressure findings, and especially against ascribing too much importance to them when not supported by other evidences of disease.

In the treatment of low blood-pressure, concerning which only a few words will be said here, removal of the cause is, of course, the first duty. If the cause is a chronic toxemia it can very often be removed or lessened, and this is particularly true of intestinal toxemia. The removal of chronic tobacco toxemia is possible but often difficult.

An essential element in the treatment of low blood-pressure is rest. To what extent physical, mental and emotional activity should be restricted depends on the effectiveness of reserve power which the heart possesses. Patients with chronic myocardial degeneration, whose blood-pressure is comparatively low and who have symptoms of circulatory insufficiency on slight exertion, may require to be kept very quiet, though many of them may be permitted to walk around, avoiding stairs and speed. In persistent low blood-pressure following typhoid fever or any of the acute infections, prolonged rest in bed is necessary.

If there are definite signs of circulatory insufficiency, heart stimulant drugs may be called for, and the drugs of this class which the writer has found most generally useful are strychnine, strophanthus, and caffeine. Digitalis may be of great service in cases with low diastolic pressure and a fairly healthy myocardium, but that drug is contraindicated in cases with myocardial degeneration and a relatively high diastolic pressure.

In cases with severe, sudden failing of the diastolic pressure due to toxemia vasomotor dilation, adrenalin and pituitrin seem suitable agents to use. The writer has had little experience and not much success with those agents.

In cases of low blood-pressure due to severe hemorrhage, the rapid introduction of a normal saline solution into the circulation is called for, and also elevation of the lower part of the body.

In some cases with a relatively high diastolic pressure and a small pulse pressure, nitroglycerin may prove useful by enlarging the pulse pressure; but nitroglycerin is absolutely contraindicated in cases in which the diastolic pressure is low.

The clinical study of blood-pressure, in spite of the seeming inconsistencies and contraindications which it discovers, promises much for internal medicine; and the sphygmomanometer is a clinical tool which seems destined to be accepted on terms of equality with the thermometer and the stethoscope. Especially fruitful is likely to be the study of the diastolic and pulse pressure; for in the absolute and relative variations of the diastolic and pulse pressures the clinical significance of blood-pressure findings is chiefly revealed.

URINARY ANTISEPTICS.—Jordan has undertaken a number of experiments under the auspices of the British Medical Association to determine the effect of various chemicals and drugs upon the growth of bacteria in the urine. He draws the following conclusions from his investigations:

- I. The acidity of the urine is readily increased to an extent of

more than double the normal by acid sodium phosphate, average dosage gr. 15 t. i. d., and to a less extent by benzoates. With large doses of citrates it is easily rendered alkaline, e. g., sodium citrate gr. 30 t i d.

2. Putrefaction of the urine and the growth of the staphylococcus is aided by alkalinity and delayed by acidity in proportion to the amount thereof. The reverse is true with *B. coli*, but only to a small extent, its growth in both acid and alkaline urines being quite luxuriant.

3. Hexamethylenetetramine (urotropin) is not itself antiseptic, but acts by producing formaldehyde in the urine. This takes place only in acid urine, the yield of formaldehyde, and, therefore, the degree of antiseptic power, being proportionate to acidity. This drug is by far the most efficient of all the urinary antiseptics.

4. Helmitol, citramine, hetraline and systopurin, though they precisely like urotropine in the urine, having no antiseptic power in alkaline urine.

5. Sandalwood oil, though not an efficient general urinary antiseptic, seems to have a specific action on the staphylococcus, which possibly accounts for its reputed favorable action in gonorrhea.

6. Benzoic and salicylic acids are fairly efficient urinary antiseptics, but of little use in alkaline urine.

7. Boric acid acts efficiently; its action being unaffected by alkalinity. It is the most efficient drug in alkaline urine we possess.

8. *Uva ursi* is quite a good antiseptic. Its action is certainly not due chiefly to the arbutin it contains.—*British Med. Journal*.

AUTO-INTOXICATION AND SUBINFECTION.—Adami believes that it is more rational to regard the evil effects of intestinal stasis as, in the main, a result of conditions favoring subinfection and low forms of infection than as a result of chronic intoxication. The term "gastro-intestinal auto-intoxication" is pernicious and not to be employed by any self-respecting member of the profession, save for so limited a set of conditions that for ordinary purposes it may safely be expunged from the medical vocabulary. While he regards it as being possible that the symptoms and diseases enumerated by Lane may follow intestinal stasis, he is convinced at least a large proportion of them may originate independently of such stasis. Before recommending the operation of short-circuiting it is necessary, therefore, to make the fullest studies, so as to discover, if possible, the nature of the organism responsible for the disturbance and its probable seat of entry. A discovery of the cause of the symptoms is calculated to suggest the appropriate means of treatment by means other than short-circuiting. Only when these have been tried and found wanting is removal or short-circuiting of the colon justifiable.—*British Medical Journal*, London.

CALCIUM AND IODINE IN PNEUMONIA.—Barr, in *The British Medical Journal*. Among the many good things in this paper deserving pondering over is his statement that the lime salts are the best remedy to limit the spread of this disease. James declares that, in the acute stages of pneumonia, the more scanty and the more sticky the expectoration, the more viscid the blood and the more lime salts and leukocytes it contains, the more favorable the prognosis.

On the other hand, if the blood is fluid, the expectorate hemorrhagic,

and the calcium salts and leukocytes are scanty, the prognosis is poor. This being so, the free use of calcium is advised; such a course also aiding in the maintenance of cardiac contraction and muscular tone.

In all febrile conditions, the blood rapidly parts with its calcium, and in such conditions it is essential that this element be restored. An examination of the urine serves as a good indicator, with regard to the calcium metabolism. If the physician finds the calcium salts deficient in the urine and albumin present, he may safely conclude that both the free and the fixed calcium salts in the blood are deficient; and the sooner they are replenished, the better.

The morai of these observations is, that calcium should be prescribed more freely. Various calcium salts are recommended, among them the lactate, the chloride, and the carbonate; but we were particularly interested to learn that Barr has had especially good results in pneumonia with calcium iodide and tincture of iodine, particularly in cases of pneumonia complicating bronchial asthma. Possibly his hypothesis will help to explain the highly satisfactory action of iodized calcium, in the treatment of pneumonia, as reported by many contributors to this journal.

Dr. Barr is also a believer in the use of vaccines, especially as a prophylactic and also during the stage of resolution. The calcium iodine is also employed by him during the stage of resolution, with good results. Heart weakness he combats with strychnine, caffeine, digitalis, and, in extreme cases, with intravenous injections of strophanthin. The temperature is reduced by applications of the ice-bag to the abdomen, while reflex stimulation is secured by means of mustard poultices applied to the affected side. In troublesome cases of insomnia, he not infrequently secures rest for the patient by the use of hyoscine, morphine and atropine.

As regards diet, Barr claims good results from the use of glucose or syrup of glucose and sugar of milk. Milk is an excellent food, but is not always well digested, and, accordingly, should be well diluted when given.—*Charlotte Medical Journal.*

VACCINES FROM THE STANDPOINT OF THE PHYSICIAN.—Horder, in the *London Lancet*, believes that the growing popularity of vaccine therapy is not an indication of its utility, but, rather, is due to desire on the part of the doctor not to be left behind, in the demand for vaccine treatment on the part of patients. He argues strongly against the use of any but autogenous vaccines, and especially inveighs against mixed vaccines, the use of which, he says, is quite as bad as failure to make a correct bacteriological diagnosis. This latter he considers the crucial point in the use of vaccines. Diagnosis cannot be made without the greatest care and the co-operation of a competent bacteriologist. It must be borne in mind that all other factors available for treatment of the patient must be employed along with the vaccines. Of these, perhaps the most important are securing and maintenance of free drainage, and the raising of the patient's general health.—*Charlotte Medical Journal.*

FUNCTIONAL KIDNEY TESTS.—W. E. Stevens, San Francisco, *Journal American Medical Association*, May 16, 1914.

Stevens reports the findings from the application of 108 tests, using in the majority of cases after catheterization of the ureters, the phlorizin, phenolsulphonephthalein and urea tests simultaneously to determine their comparative functional value. He remarks that to speak authoritatively one must be thoroughly familiar with their technic. This is specially true of the phlorizin test and to some extent with the phenolsulphonephthalein test. His method was to use three sets of two bottles labeled R and L collections from the right and left kidneys. After catheterizing the ureters, 2 c. c. of an 0.5 per cent of a phlorizin solution was intramuscularly injected. While waiting for the appearance of sugar, enough urine was collected in bottles numbered 1 for the microscopic examination and the quantitative urea estimation. As soon as the reduction of heated Fehling's solution became apparent on both sides, the urine was collected for fifteen minutes in bottles numbered 2. At the end of this time 1 c. c. of a phenolsulphonephthalein solution containing 0.06 per cent of the dye was injected intravenously and the urine then permitted to flow into the two test-tubes containing a 25 per cent solution of sodium hydroxid. As soon as the characteristic discoloration occurred in both tubes, the time of appearance was recorded and the urine collected for fifteen minutes in bottles numbered 3. The amount of urea was determined by two Doremus urenometers and the amount of sugar by two Lohnstein saccharimeters. The phenolsulphonephthalein estimations were made by colorimetric test-tubes, as described by Cabot. His conclusions, in substance are: In normal cases the phlorizin, phenolsulphonephthalein and urea tests show almost identical values for both kidneys. In the pathologic cases all three show almost equally low values on the diseased side as compared with the healthy side, thus showing their almost equal practical value. The simultaneous use of the tests as described tends to greater accuracy, is not specially time-consuming or complicated and can be done by an intelligent nurse. Moreover, it gives positive assurance as to which kidney is performing the most work. In pathologic cases a coincident lessened functional value on one side points unmistakably to a marked defect on the corresponding kidney. This with a normal functional value on the opposite side and satisfactory total functional values as shown by blood cryoscopy, the bladder phenolsulphonephthalein test, etc., would permit the removal of the diseased organ. A single renal test would not justify such an operation. Prior to operation comparative functional tests should be strengthened by tests of total renal function. The urea is the quickest test performed and with a minimal discomfort to the patient. It is not based on the elimination of a foreign substance. As compared with the phlorizin test, the phenolsulphonephthalein test is subject to fewer technical errors and is less time-consuming, a factor of no little importance to the patient as well as to the physician. On the other hand, the quantitative estimation for the excreted dye, even with the Duboscq colorimeter, is subject to a not negligible amount of error, while following phlorizin injection the estimation of sugar by means of the Lohnstein saccharimeter is mathematically correct.

TO FIND GONOCOCCI IN THE FEMALE.—A common mistake in examin-

ing the secretion in the female is to take it from the vagina, which is full of organisms of all sorts. The three points from which secretion should be obtained for examination are: the cervix, the urethra, and Bartholin's gland. Gonococci are more likely to be present if the secretion be obtained just after the cessation of a menstrual period or as the lochia is beginning to diminish after the emptying of a pregnant uterus. If difficulty is encountered in demonstrating the organism in a suspicious case, slight traumatism to the points from which the secretion is to be obtained and the taking of the smears twenty-four hours later will sometimes result in more organisms being present in the discharge and thus facilitate their demonstration. A similar result may be obtained by a chemical irritation, such as the application of a strong solution of silver nitrate and the examination of the increased secretion thus produced.—Charles C. Norris in the *Long Island Medical Journal*.

TREATMENT OF ECZEMA OF NURSINGS WITH PELLIDOL OINTMENT.—Erich Rominger (*Arch. f. Kinderheil.*, April 1, 1914) has found good results in skin diseases of infants from the use of pellidol which contains a substance related to scarlet red, diacetyl-amido-toluol, and has a good effect on the epithelial structures. The author made use of this ointment in fifteen private cases of skin disease, using the salve alone without changing the diet and hygiene. In the clinic there were fourteen such cases—five of eczema, seven of intertrigo, one of pemphigus neonatorum, and one of impetigo contagiosa. The crusts were first removed with oil, and the pellidol salve smeared on gauze and applied to the diseased surface, being changed daily, and the patient being prevented from scratching by covering the hands with sleeves. In eczema of the head and face the exuding surface soon became dry and healthy epithelium covered it. Wet cases received the most benefit. If a one per cent salve was used the effect was good, while a two per cent salve caused redness and irritation, which rendered healing slow. In the seven cases of intertrigo, healing soon took place. The other skin diseases were similarly affected.—*American Jour. of Obs. and Dis. of Women and Children*, July, 1914.

SOME POINTS IN THE TREATMENT OF ACUTE ILEOCOLITIS.—In the *Lancet-Clinic* of March 14, 1914, Snyder tells us that in the discussion of the treatment of acute colitis in the child the first thing to insist upon is that to be rational the treatment must be individual. There are, however, certain principles of treatment applicable to all cases. With the onset of the disease it is imperative that the intestinal tract be cleared out. Snyder's preferences for this purpose are castor oil by mouth and normal saline solution for irrigation of the bowel. If there is troublesome or persistent vomiting, the stomach should be washed, the washing to be followed by the administration of broken doses of calomel until one-half of one grain is given, and still later followed by oil. Although the initial purgation and irrigation are essential, Snyder protests against the practice of giving a daily dose of oil and of continuing frequent irrigations. Thus practised they are not only useless but they are absolutely contraindicated, in that they destroy all possibility of rest to the inflamed and ulcerated bowel.

If toxemia of grave nature accompanies the onset, a hypodermoclysis of salt solution should be given without delay. Given early in the attack a salt solution is often an excellent and sometimes necessary measure, but Snyder is convinced that after the heart has been weakened by the ravages of this disease the subcutaneous injection of salt solution is not only futile, but it is capable of producing disastrous results by overcrowding the heart.

By stopping all food, by clearing out the intestinal tract, and if necessary by the use of salt solution subcutaneously, the toxemia in the majority of colitis cases promptly subsides and the disease becomes a purely local one, demanding for restoration to normal nothing so much as rest.

Rest, moreover, is not only to be assured by withholding further purgation, by withholding food, and by the use of opiates, but the environments of the child should be made peaceful and quiet. Many of these children are of such age as to be susceptible to the depressing influences of anxious faces, tears, and morbid and thoughtless remarks, which are too often seen and heard over the sick bed. The physician must handle such situations with tactful but none the less positive firmness. The child with colitis should be kept in bed in the recumbent position. Carrying or swinging the child in her arms may be the mother's right when that child is only bad and spoiled, but when that child has colitis it is not only a selfish, but a cruel right to assert. Make that plain to the mother and exact obedience to orders.

Again, some of these children with colitis are old enough to have been trained to use a vessel. The posture assumed and the straining that invariably takes place when the child is put on the chamber makes it quite certain that its use should be forbidden in this condition. And yet Snyder asserts he has time and again been forced to modify such an order by the determination and by the mental and physical anguish of his little patient. It is remarkable how much pain and suffering some of these children will endure in efforts to control the sphincter. They present a difficult problem. If the child is to be successfully persuaded that it is all right to soil the napkin it can be done not by any erudite reasoning on the part of the doctor, but by the gentle assurance of the mother. In those cases in which all persuasion fails the chamber will have to be allowed, but the privilege of its use should be timed, and limited, not to minutes, but to seconds.

The time for the resumption of feeding and the character of the food depend so much on the individual case that their discussion will not be undertaken in this paper.

Water should be given freely throughout the attack. Liberal quantities of water especially indicated in the early part of the disease when the bowel movements are frequent and while food in other forms is being withheld. It is the custom of Snyder at this time to have the nurse or mother measure and chart the amount of water taken by the patient. If the amount is regarded as insufficient, it is supplemented by subcutaneous injection. This procedure, though rarely necessary, is a much safer and surer way than to rely on bowel injections to make up the deficiency. The lower bowel is in no condition to absorb even water.

Furthermore, it is always wise to have a care lest further irritation result from the mechanical injury due to unskilled or too frequent use of the rectal tube.

THORACIC COMPLICATIONS OF RICKETS.—Drs. J. Howland and E. A. Park of Baltimore, presented this paper, which was read by Dr. Park. It dealt with a severe form of rickets which increased the danger from the disease. In this form the thorax was especially affected. The disease might be mistaken for osteomalacia. The thorax lost its rigidity and no longer withstood the atmospheric pressure and the pull of the diaphragm. In these cases the thorax was smaller than the head; the chest was shaped like a wedge, the anterior part of the chest being the narrow end. Many fractures of the ribs might occur. The deformity of the chest resulted in diminution of capacity and reduction of the volume of the lungs. The deformity was greater on the right side than the left, as the heart protected the left side. With inspiration the deformity was increased and there was an actual decrease in the circumference of the thorax. With such a crippled thorax respirations became very rapid, sometimes 80 to 100. Any pulmonary infection became very dangerous. The lung became emphysematous in front and atelectatic in the posterior lobes. The volume of both lungs was much reduced. The heart in these cases became hypertrophied in the right ventricle. The weight of the heart was increased, being the weight of a normal child's heart, while the child itself was much under weight. Death was due to failure of respiration by mechanical causes. The x-ray pictures of such cases were characteristic.—*Medical Record.*

SANITARY OIL FLOOR DRESSING IN PUBLIC SCHOOLS. In order to prevent disease acquired in the school room, C. Ward Crampton, M.D., Director of Physical Training, New York Schools, advises the use of a sanitary oil floor dressing to lessen the amount of dust. He also recommends that coughing and sneezing be prevented as far as possible. This can be controlled by instructing each child to provide himself with a clean handkerchief. This should be carried conveniently so as to be available for immediate use. The children should be instructed when coughing or sneezing to guard the mouth and nose with the handkerchief so as not to spread any infectious material throughout the room. Sometimes the impulse to cough or sneeze is so sudden that this cannot be done. The child should, therefore, get in the habit, when he coughs or sneezes, of turning his head away from his neighbors, and should guard the mouth and nose with the hand, but every effort should be made to make proper use of the handkerchief.—*Medical Record.*

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

CALADIUM SEGUINUM.—Inclination to rest, and aversion to move. Burning (stomach and skin). Perspiration which very much attracts the flies. After a short sleep and after perspiration many symptoms are relieved.—*Lippe Manuscripts*.

ANTIMONIUM CRUDUM.—He is much concerned about his fate. Disposition to grow fat. Inflammation of the muscles. Aversion to be looked at, and to be touched. Horn-like excrescences and dispositions to abnormal organizations of the skin. Gastric symptoms, worse in the afternoon and at night. When the symptoms reappear they change their locality, or go from one side of the body to the other. Aggravation from drinking sour wine, in the heat of the sun, after eating (pork), at night, or after bathing. Amelioration during rest and in the open air.—*Lippe Manuscripts*.

PROFESSOR VON BEHRING'S ACKNOWLEDGMENT OF HOMEOPATHY AND SOME OF ITS CONSEQUENCES.—I. *Von Behring's Homage to Hahnemann and Homeopathy.*—That the work of Jenner, Pasteur, Koch, Roux, and Von Behring, both in curing and in preventing disease, is on homeopathic lines has long been obvious not only to homeopaths, but to many of these investigators themselves. Among old-school workers who have made acknowledgment to homeopathy are Pasteur, Roux, and Von Behring. To the last is due the most recent, precise, and definite acknowledgment.

In the second number of his *Experimental Therapy* he deals with "Modern Phthisio-genetic and Phthisio-therapeutic Problems in Historical Illumination,"* the dedication of which is dated October 1, 1905. Professor von Behring deals at some length with the homeopathic aspect of his work. He pleads also that the word "Homeopathy" should be accorded the "citizenship of medicine" (*Medicinisches Bürgerrecht*) and no longer be tabooed.

In the following interesting passage (pp. xxvi, xxvii), Von Behring sets forth the claims of homeopathy and the new therapy in a manner that leaves nothing to be desired:—

"The scientific principles of this new tuberculo-therapy are yet to be established, just as the scientific principles of my antitoxic serum therapy

remain to be explained, notwithstanding the assertion by many authors that therapeutic action of my diphtheria and tetanus antitoxins is clearly understood since the promulgation of Ehrlich's side-chain theory. For speculative minds the new curative substance will undoubtedly become a most interesting object of scientific investigation, but I do not believe that medicine will profit much by it. In spite of all scientific speculations and experiments regarding small-pox vaccination, Jenner's discovery remained an erratic block in medicine, till the biochemically thinking Pasteur, devoid of all medical class-room knowledge, traced the origin in this therapeutic block to a principle which cannot better be characterised than by Hahnemann's word—"Homeopathic."

"Indeed, what else causes the epidemiological immunity in sheep, vaccinated against anthrax, than the influence previously exerted by a virus, *similar* in character to that of the fatal anthrax virus? And by what technical term could we more appropriately speak of this influence, exerted by a similar virus, than by Hahnemann's word—"Homeopathy"?

"I am touching here upon a subject anathematised till very recently by medical pedantry; but if I am to present these problems in historical illumination, dogmatic imprecations must not deter me. They must no more deter me now than they did thirteen years ago, when I demonstrated before the Berlin Physiological Society the immunising action of my tetanus antitoxin in infinitesimal dilution. On this occasion I also spoke of the production of the serum by treating animals with a poison which acted the better the more it was diluted, and a clinician, who is still living, remonstrated with me, saying that such a remark ought not to be made publicly, since it was grist for the mill of homeopathy. I remember vividly how Dubois-Reymond, who during the progress of the demonstrations and discussions had become drowsy, suddenly sat up all attention when I replied in about these words:—

"Gentlemen, if I had set myself the task of rendering an incurable disease curable by artificial means, and should find that only the road of homeopathy led to my goal, I assure you dogmatic considerations would never deter me from taking that road."

On the above passage the *Homeopathic World* of March 1st made the following comment:—

"This is clear, manly, and straightforward. There is no patronising of homeopathy here—this is downright homage. And what is more, there is clear acknowledgment of the necessity of the infinitesimal dose into the bargain. We have often contended that the infinitesimal dose is a greater stumbling-block to our allopathic friends than is the law of similars; and until they accept it the homeopathy they may assimilate will do very little good. But Von Behring acknowledges not only the law, but the infinitesimal dose also; and it is hard experience which has driven him to this conclusion. He has found out that, whatever the explanation may be, the Law of cure is the law that *LIKES CURE LIKES*."

II. *The Editors of the "Lancet" and Professor Von Behring.*—That the *Homeopathic World* in no way exaggerated the importance of Professor von Behring's admission of the truth of the homeopathic doctrine and his approval of the power of the infinitesimal dose is proved by a little history to be related below.

The *Homeopathic World's* article, entitled "The Coming Peril," which contained the above quotation, was read both by the editor of the *British Medical Journal* and the Editors of the *Lancet*. The Editor of the former journal was content to write on it a note in his well-known elephantine-humorous style, headed "A Peril to Homeopathy," but he very judiciously refrained from making any reference to Von Behring. The attention to the Editors of the *Lancet* was called to the article by a correspondent. The following letter appeared in the *Lancet* of December 22nd:—

The Claim that Prof. Von Behring Held Homeopathic Doctrine.—To the Editors of The *Lancet*. SIRS,—The *Homeopathic World* (published in London), under date November 1, 1906, publishes what claims to be an extract from Behring's pamphlet, translated from the German under a headline in capitals: "Professor von Behring acknowledges Homeopathy." From the extract given I make the following extract:—

"I am touching here upon a subject anathematised till very recently by medical pedantry; but if I am to present these problems in historical illumination, dogmatic imprecations must not deter me. They must no more deter me now than they did thirteen years ago, when I demonstrated before the Berlin Physiological Society the immunising action of my tetanus antitoxin in INFINITESIMAL DILUTION" (capitals mine.—D. A.-B). Of the truth or otherwise of this statement I am ignorant. That being so, may I through you ask those wiser than myself whether Professor von Behring did demonstrate before the Berlin Physiological Society thirteen years ago "the immunising action of my tetanus antitoxin in infinitesimal dilution"?

I am, Sirs, yours faithfully,
DAVID ANDERSON-BERRY, M.D. Edin., F.R.S. Edin.

St. Leonards-on-Sea, December 14, 1906.

In reply to this Dr. Clarke addressed to the Editors of the *Lancet* the following:—

Prof. Von Behring on Homeopathy and the Infinitesimal Dose.—To the Editors of the *Lancet*. SIRS,—I am glad to see that Prof. von Behring's pronouncement on Homeopathy and the power of the infinitesimal dose, quoted by me in the *Homeopathic World*, has made one of your correspondents "sit up" no less effectually than Von Behring's remark did Prof. Dubois-Reymond when his demonstration of the power of the infinitesimal in regard to tetanus antitoxin was made before the Berlin Physiological Society. If it is any comfort to Dr. Anderson-Berry, perhaps you will allow me to inform him that Von Behring's work containing the passage is entitled (according to the *Cleveland Medical and Surgical Reporter* of December, 1906) "Modern Phthisiogenetic and Phthisio-therapeutic Problems in Historical Illumination," 1906. Perhaps Dr. Anderson-Berry would prefer to administer tetanus antitoxin in massive doses rather than adopt a method devised by Hahnemann, however safe and effective?

I am, Sirs, yours, &c.,

JOHN H. CLARKE, M.D.

8, Bolton Street, W.,
Christmas Day, 1906.

(Ed. *Homeopathic World*.)

The next step in the proceedings was the receipt by Dr. Clarke of the following letter from the *Lancet* office:—

THE *Lancet* OFFICES, 423, STRAND,

December 31, 1906.

DEAR SIR,—We have received your letter. We do not care to publish communications which allude to other professional gentlemen being made to “sit up,” and we shall be obliged if you will give us a reference to the newspaper from which you quoted.

We are, yours very faithfully,

THE EDITORS.

Dr. J. H. Clarke,

8, Bolton Street, Piccadilly, W.

Dr. Clarke's reply to this was to send to the Editors of the *Lancet* the entire article from the *Homeopathic World* of November last, marking the passage containing the phrase “sat up.”

I remember vividly,” says Von Behring, “how Dubois Reymond, who during the progress of the demonstrations and discussions had become drowsy, suddenly sat up all attention when I replied in about these words:—

“Gentlemen, if I had set myself the task of rendering an incurable disease curable by artificial means, and should find that only the road of homeopathy led to my goal, I assure you, dogmatic considerations would never deter me from taking that road.”

Dr. Clarke said that if the Editors of the *Lancet* preferred to substitute “startled” for the phrase “made sit up,” they were at liberty to do so, but he thought they would admit that his allusion was sufficiently pointed.

Apparently it was too pointed by half, for that is the last that has been heard of the matter. Up to the present date the letter has not appeared in the *Lancet*; and until this meets his eye the inquiring correspondent of the *Lancet*, Dr. Anderson-Berry, must remain unsatisfied. Can it be that the Editors of the *Lancet* have also been made to “sit up,” and to fear that the letter, if published, might make the rest of their readers “sit up” no less erect than Dubois-Reymond and Dr. Anderson-Berry?

III. *The Medical Press*.—To the credit of the *Medical Press*, be it said that its sense of Editorial fairness is made of robuster stuff than that of the *Lancet*. Witness the following letter, which appeared in the issue of January 16th:—

SERUMS, VACCINES, AND HOMEOPATHY.

To the Editor of the *Medical Press* and Circular.

SIR,—If it is not too late to comment on some editorial remarks in your issue of December 26th, I shall be obliged if you will allow me a little space. The Christmas holidays put me in arrears with my journals, or I should have taken the opportunity earlier.

In your note on the annual meeting of the British Homeopathic Association, you say: “It is entertaining to read that the present-day use of serums, vaccines, and emulsions brings the rest of the profession nearer to homeopathy.” And you add: “We remember some time ago a homeopath claiming diphtheric antitoxin for their own.”

I think, sir, you will allow that if there are two men living who know more about diphtheria antitoxin in particular, and serums in general,

than any one else, these two men are Dr. Roux and Professor von Behring. It is on record that Dr. Roux has admitted that "there is truth in the Hahnemann method of curing likes with likes." And now Von Behring has published a statement which confirms this, and shows that it is the Seropaths themselves—if I may use the word—rather than the homeopaths who are proclaiming that the new practice is really homeopathy, with the infinitesimal dose thrown in. In his recent work (1906), entitled *Modern Phthisio-genetic and Phthisio-therapeutic Problems in Historical Illumination*, Von Behring, speaking of the tuberculin treatment of phthisis, says the "scientific principle" of it is not established, but:—

"In spite of all our scientific explanations and experiments regarding small-pox vaccination, Jenner's discovery remained an erratic block in medicine till the biochemically thinking Pasteur, devoid of all medical class-room knowledge, traced the origin of this therapeutic block to a principle which cannot be better characterised than by Hahnemann's word, 'Homeopathic.'

"Indeed, what else causes the epidemiological immunity in sheep, vaccinated against anthrax, than the influence previously exerted by the virus, *similar* in character to that of the fatal anthrax virus? And by what technical term could we more appropriately speak of this influence, exerted by a *similar* virus, than by Hahnemann's word, 'Homeopathy'?

"I am touching here upon a subject anathematised till very recently"—I fear, sir, the present might also be included—"by medical pedantry; but if I am to present these problems in historical illumination, dogmatic imprecations must not deter me. They must no more deter me now than they did thirteen years ago, when I demonstrated before the Berlin Physiological Society the immunising action of my tetanus antitoxin in infinitesimal dilution. On this occasion I also spoke of the production of the serum by treating animals with a poison which *acted the better the more it was diluted*" (italics mine), "and a clinician, who is still living, remonstrated with me, saying that such a remark ought not to be made publicly, since it was grist for the mill of homeopathy. I remember vividly how Dubois-Reymond, who during the progress of the demonstrations and discussions had become drowsy, suddenly sat up all attention when I replied in almost these words: 'Gentlemen, if I had set myself the task of rendering an incurable disease curable by artificial means, and should find that the road of homeopathy led to my goal, I assure you, dogmatic considerations would never deter me from taking that road.'

I think, sir, you will admit that homeopaths have plenty of outside justification for the claim they make, a claim which seems to have caused you some entertainment.

I am, Sir, yours truly,

JOHN H. CLARKE.

8, Bolton Street, W., January 13, 1907.

IV. *American Testimony*.—Thus far the Continent of Europe. From Harvard University comes evidence in confirmation. Dr. Richard C. Cabot, Instructor in Medicine at Harvard University, recently read a paper before a Medical Society (*New England Medical Gazette*, December, 1906) in which he cited the experience of Dr. Trudeau with the *Tuberculin* treatment.

It must be borne in mind that Dr. Cabot is an allopath, and when he speaks of "our school" he means the allopathic.

"The use of *Tuberculin* is a form of vaccination which illustrates better than any example known to me the approval of homeopathic principles in our school. *Tuberculin* is, of course, not an antitoxin, but a toxin, and its therapeutic use is a form of vaccination. The poison of tuberculosis which can produce some of the symptoms of tuberculosis is here applied in small doses for the cure of tuberculosis through the production of immunity, or resisting power in the tissues. Surely this is a case of '*similia similibus curentur*,' as homeopathic writers have pointed out. The use of bacterial vaccines in infectious diseases recently produced by A. E. Wright is distinctly homeopathic.

"But the revival of *Tuberculin* therapy within the past ten years (after its abandonment in 1890) illustrates the victory of another homeopathic doctrine within our school. I mean the doctrine of the occasional utility of very minute doses. No one in this country has had so much experience with tuberculosis as Trudeau, of Saranac Lake. No one has tested so critically and cautiously the merits and demerits of this remedy. As a result of his fifteen years' experience of its use he published last August an account of his own methods, and in a recent letter to my friend, Dr. John B. Hawes, jun., he has amplified and reiterated his statements in a most interesting way.

"What dose does he use? Not the 10 milligrams often employed in the early nineties—not even the 1 milligram or $\frac{1}{2}$ milligram recommended later. At present he begins his treatment in febrile cases with 1-10,000th of a milligram, and in febrile cases with a 1-100,000th of a milligram. This 1-100,000th of a milligram, when injected under the skin in a centimetre of water and absorbed into the circulation, becomes diluted about 5,000,000 times by the body fluids. Hence we imagine the original milligram of *Tuberculin* acts in a dilution of 1-500,000,000,000! What fixes this dose? Precisely the homeopathic principle, namely, to produce a definite good effect without any observable ill effects."

V. *Great Britain.*—We have thus among old-school authorities the following who have acknowledged the truth of homeopathy as exemplified in modern old-school practice:—In Europe: PASTEUR, ROUX, VON BEHRING; in America, TRUDEAU, CABOT.

There are numbers of workers on similar lines in our own country, whose vision can be no less clear than that of European or American investigators. When will one of them do for Great Britain what Von Behring has done for Europe and Trudeau for America? In the "opsonic" treatment founded on the discoveries of Sir. A. G. Wright infinitesimal doses of poisons are used to cure states produced by those very poisons. They are, in effect, the nosodes of homeopathy, and, like Von Behring and Trudeau, those who use them are compelled in making use of the homeopathic principle to use also the infinitesimal dose.

The opportunity is great. The service to the cause of scientific freedom which candour like that of Von Behring's would effect in the British medical world would be enormous. Will no one seize the opportunity?—(*Homoeopathic World.*)

THE HAHNEMANNIAN MONTHLY.

OCTOBER, 1914

THE WORK OF THE BUREAU OF MEDICAL EDUCATION AND LICENSURE IN RELATION TO STATE MEDICINE.

BY

J. MONTGOMERY BALDY, PHILADELPHIA.

DURING the session of the Legislature of Pennsylvania in 1909, the Medical profession made its most determined effort to pass a one board medical bill. This effort failed ignominiously. The Legislative Committee of the Pennsylvania State Medical Society, after due consideration, decided to make one more effort to bring about this legislation. The results of the efforts of that Committee during the season of 1911 are now history, and a one board medical bill is incorporated in the Acts of Assembly of the State of Pennsylvania. Two years of administration under this legislation convinced the Bureau of Medical Education and Licensure that certain faults and weaknesses existed in the Act of 1911, and that it should be amended. During the session of 1913, carefully considered amendments were proposed and enacted, thus correcting many of the faults of the original Act. The Bureau of Medical Education and Licensure, created under the provisions of this legislation, has, therefore, had the administration of medical matters in the State of Pennsylvania in hand for a period of a little over three years. During this time no official report has been made either to the medical profession nor to the State at large as to the working of this Bureau. It seems, therefore, fitting at this time that both the medical profession and the people of the State should have some reliable insight into the necessities of such a law, what it is the aim of the Bureau to

accomplish, the means it has adopted to bring about this end, and what has been actually accomplished by its administration.

As a matter of history, it is well known that there were three boards of medical examiners in the State of Pennsylvania up to 1911: the Board, under the authority of the old school physicians, with power to pass on the qualifications of any graduates in medicine applying to them; the Board under the control of the Homeopathic Physicians, with similar powers; and the Board under the control of the Eclectic Physicians, with similar powers. It will be recalled that it made no difference from what school an applicant graduated, nor how often he had failed any one or two of the Boards, he had the option of again applying to any one of the three Boards he saw fit. Although the Medical Act authorizing the control of medicine by this plan was intended to keep incompetently educated physicians out of the State of Pennsylvania, as a matter of working the sum total of results accomplished was that at no time during the administration of this law was any man, however incompetent, known to fail eventually to be admitted by one or the other of these Boards. In other words, the Medical Law of Pennsylvania was a farce, and only existed in order to deceive the public, who relied upon the State to indicate to them by its license that the man holding that license was a competently educated man in medical matters. Pennsylvania being amongst the last of the States to abolish this system of State control, was consequently flooded with incompetents, and with men who were rejected by other States. Hence, the necessity for the Act of 1911.

At the time the Bureau of Medical Education and Licensure took charge of the administration of the present Medical Act, medical matters in Pennsylvania were so chaotic as to be a reproach to the State. The Medical Schools were at variance with the Medical Counsel and Medical Boards. The Schools were suspicious of each other. Medical men throughout the State were partisans of one or the other. Medical education in the schools was of unequal quality, and although the equipment of the various Institutions had fundamentally a solid foundation, they were not being developed to the highest ideals, and Pennsylvania was beginning to suffer materially in the eyes of the Medical world as indicated by the low classification of our Schools by national medical authorities.

Preliminary requirements for entrance into Medical educa-

tion were at a minimum and poorly administered, the medical course itself was insufficient and incompetent to measure up to the higher ideals and ambitions of American medicine. At the start, a glance over the field was not encouraging, and the results capable of being accomplished seemed dubious, or at best to be long delayed.

The Bureau of Medical Education and Licensure started out with the single idea of making the Medical situation in Pennsylvania the best and most comprehensive in the country. In order to accomplish this, it early recognized the fact that the first reforms would have to be of our own house, and that to accomplish the object, it would be necessary to have the co-operation of the Medical Profession and Medical Schools. The Medical Schools of the State, without exception, arose to the occasion and grasped the opportunity under the lead of the Bureau. It was a case of pull together and pull hard. Animosities were all buried and forgotten. Everybody kept the object in view, and constantly worked toward the final goal. The gross result of all these efforts has been to accomplish the following results: the preliminary requirements before an applicant can enter a medical school of the State have been raised as a State standard compulsory on every School in the State, from graduation in a four year high school course to an additional year of credits in physics, chemistry and biology, of college grade, all of which must be acquired prior to entering upon medical studies. Thus, the possibility of nullifying the entrance requirements by allowing a student to begin his medical course with conditions is entirely abolished.

During the same session of 1911, a bill was enacted creating the Bureau of Professional education. It is the duty of the administrators of this bill to pass upon all the preliminary requirements of every student entering a State College, thus taking out of the hands of the School itself the possibility of prejudiced judgment in regard to these credentials, and securing a common and competent judgment of these credentials for all alike. The medical course itself has been strengthened in many of its departments, and requirements of practical work, such as administration of anæsthetics, assistance at operations, attendance on post mortems, the attendance of obstetrical cases have been recommended by the Bureau to the schools and have been willingly adopted by all of them. After

the completion of a four year course at the School itself, the graduate of medicine must now spend twelve months in an approved hospital as interne. This gives him a full year of experience at the practice of the profession he has been heretofore studying, under the care and leadership of competent practitioners of medicine and surgery, before he can enter the State examination to earn his license to practice medicine and surgery. Pennsylvania is the first State in the Union to have adopted this interne year requirement, and since her action in the matter, medical authorities throughout the whole country are moving rapidly in the same direction under the influence of the leadership of this State.

The Bureau early appreciated the importance of reciprocity. It is a matter of common knowledge that "State's rights" in this country has stood in the way of a National law for the issuing of licenses to applicants who are able to show competency to practice medicine and surgery. This is a condition, and not a theory, and one which medical authorities the country over have been trying to solve. The Bureau early appreciated the fact that the license should go with the flag, and that when a man had once shown his competency and had received his license, that this license should carry the right to practice in any State in the Union. It is a great injustice to such a man that he should be enforced to undergo a technical examination each and every time the exigencies of life forced him to remove from one community to another. Only too often does this necessity arise from ill health or family affairs, perfectly legitimate reasons and a sufficient burden in itself to a man without adding the further burden of preparation for a technical examination. In 1911, Pennsylvania did not reciprocate with a single State in the Union. What few States she had formerly reciprocated with had cancelled their agreements because of our low standards. Today there are some twenty-eight States which will accept in reciprocity the licensing certificate of Pennsylvania provided the applicant has graduated from a School in good standing.

All reciprocity agreements entered into by the Bureau of Medical Education and Licensure in behalf of the State are based on two points: Namely—that the applicant has graduated from a School recognized by the Bureau, and that he in addition has passed the State examination of the State from which he applies. In consequence of this, there are a con-

siderable number of medical practitioners in the country who are unable to enter Pennsylvania without taking the regular examination, for the reason that the Schools from which they have graduated are now extinct, or that they received their license to practice medicine before State licensing boards came into existence. These men have had years of experience, are mostly fairly competent practitioners of medicine, are older men and will probably not remain in practice much longer. These are the very men to whom an examination including modern laboratory methods would be a great hardship, and the majority of whom would be excluded from the benefits of our reciprocity agreements.

The Bureau has thought it wise to open the doors of Pennsylvania to these men provided they could show a fair knowledge of the practice of medicine, and have, therefore, instituted an examination at the bedside, at which examination is excluded laboratory and technical methods, and which is confined largely to practical every-day practice of medicine. To this examination may be admitted at the discretion of the Bureau any applicant who can show that he has graduated from a school that is now extinct, that he was licensed to practice medicine before the day when State Licensing Boards came into existence, or any other physician who can show that he practiced medicine for ten consecutive years prior to January 1st, 1913. The Bureau believes that in this manner it has largely overcome the disadvantages under which the older men in the profession have labored in the matter of reciprocity.

The sum total of results obtained has been to transfer Pennsylvania from one of the lowest grade positions medically, to the very leadership of the Nation, and she has at last attained the position which is her just due in view of her past brilliant medical position.

The raising of the standard of State medicine has resulted in cutting down the classes in the Medical Schools at least thirty per cent. Partly in consequence of this prohibition to the incompetent to even begin the study of medicine, there has arisen throughout the whole country an enormous swelling of the ranks of the various cults and branches of medicine. Men and women who are utterly incompetent mentally to undertake the strenuous studies necessary to any profession, have sought every possible backdoor by which they might evade the

proper preparation for their work and by which they could practically practice medicine under this evasion.

This Bureau early foresaw that if the people of this State were in future to be given proper medical attendance, it would be useless to insist on the Schools turning out competently educated medical men unless these backdoors were closed, and that every person desiring to practice medicine or any branch thereof, was forced to acquire a competent education for whatever therapy he might pretend to practice. It is perfectly evident to any intelligent mind that the prime necessity for the relief of any human ailment is the ability to determine what that ailment is. It is utterly impossible for any one to treat the sick by any method of therapy with any justice to the sick themselves, or with any hope of results unless they know what is the matter with the patient.

The Medical Act of Pennsylvania contains the following words: "it shall not be lawful for any person in the State of Pennsylvania to diagnose diseases* * * * or to hold himself or herself forth as able to do so unless he or she shall first fulfill the requirements of this Act, and has received a certificate of licensure from the Bureau of Medical Education and Licensure." The significance of this clause must be apparent to everybody, namely, that anyone pretending to practice any branch of medicine or surgery must qualify himself or herself under the provisions of the Medical Act, to know how to determine what disease effects the patient upon whom they are intending to administer treatment. This, together with that part of section six of the Act, which gives the Bureau of Medical Education and Licensure full authority to regulate and license any or all branches of medicine and surgery, opens the way for a proper regulation in all medical matters.

The first action of the Bureau was to take up the matter of Midwifery, but its funds being insufficient to properly regulate this branch of medicine, a separate Act was introduced into the Assembly of 1913 which gave the Bureau full power to regulate and control this practice, and carried with it its own appropriation. The appropriation granted by the Legislature for this work was not sufficient to establish a proper and competent control throughout the enormous territory of this great State. The Bureau, therefore, has devoted its main energies to the two ends of the State most thickly populated. Philadel-

phia and Allegheny counties. The balance of the State has been brought under control measurably through 112 different centers, scattered at such points as the State Health Department has established tuberculous dispensaries. The physicians in charge of these dispensaries, have in as far as possible been made the inspectors of midwifery of their several districts, and very encouraging results are being attained through many of them. Already a great many midwives who have violated the law have been prosecuted and convicted, and if the coming Legislature can be induced to appropriate a somewhat larger sum for this work, the competency of this control, and the value to the community, can be made much greater in future, with the present regulation as a basis.

The reports from the Pittsburgh and Philadelphia ends are encouraging to the degree that Pennsylvania has beyond doubt established in these great districts the most efficient control of midwifery known in this country. Very shortly, the Bureau will be able to publish such accurate data and such improved results as will be a help to the entire country in the working out of this whole problem, which in the past has seemed so hopeless. Every effort is being made to establish a school of midwifery in Pennsylvania along the lines of that conducted at Bellevue Hospital, New York City, with the prospects of early success. The Philadelphia Health Department is co-operating earnestly with the result of the possible establishment, in the near future, of such a school at Blockley Hospital.

The efforts of the Bureau were next turned to those people practicing medicine under the cover of different cults. Two classifications have been established through which to control the practice and future education of these people.

The term "Drugless Therapy" has been adopted to cover the practice of such cults as Chiropractic, Napravit, Neuropathy, Spondylo-Therapy, Suggestive Therapeutics, Metaphysics, and various other cults based on the principles underlying the practice of these various methods of Therapy. State licenses have been issued to certain ones of these practitioners who were already in the field who have been able to show certain qualifications of character and time of practice and education, as laid down by the Bureau, limiting them in their Therapy strictly to drugless methods. The license issued to those practising any branch of drugless therapy does not confer the right to use the title of "Dr." nor does it authorize

the holder to practice Pharmacy, Dentistry, Osteopathy, nor to treat persons sick with quarantinable diseases, nor to practice surgery, midwifery, or medicine by the use of drugs administered internally or applied externally. An examination was held for those persons pretending to have a knowledge of these cults but who had been unable to establish the standard laid down by the Bureau, which would entitle them to a license without examination.

Henceforth, any person wishing to practice any of the subdivisions of Drugless Therapy as indicated above, must submit an educational qualification to the Bureau, before he or she can be admitted to a State examination for licensure, consisting of the following: a preliminary education equal to that of a medical student, and the satisfactory completion of a three year course of study in addition. Means have been provided, in the Medical Schools of the State by which this course may be adequately given under the auspices of the schools. This course is sufficiently comprehensive to insure that the individual successfully passing it, as well as surviving the State examination, will be as amply able to make a successful diagnosis as will the full medical graduate. Thus, the future of the practice of any and all cults is secured for this State on a proper educational basis, and should solve the whole question of contention between various grades of medical practitioners for all time; and a barrier has been raised over which it will be extremely difficult for the incompetent or the crook to climb and continue to impose on the public. At the same time, the elements of good and truth which are contained in these cults are secured to medicine and are properly safeguarded in the interest of the public.

The second classification of the Drugless people has been given the name of "Massage and Allied Branches." This classification takes care of all those people who conduct methods of Therapy usually connected with Hydro-Therapy institutes. The educational qualification of these people has been set as a beginning on a basis commensurate with the necessities of the business. A preliminary education of a completed grammar school course, a four months' course of education in institutions approved by the Bureau followed by a State examination for licensure, insure a proper standard for the future. Persons practicing under this classification are licensed to do so only after the diagnosis has been made by

some one authorized by law. The people in the field in these branches have been dealt with on similar lines with those in Drugless Therapy. The subjects involved are such as Massage, Hydro Therapy, Thermo-Therapy, Helio-Therapy, Electro-Therapy, Swedish Movements, Mechano-Therapy, and Mechanical Treatments of all kinds.

In the past, Chiropody has been looked upon with a considerable amount of contempt, and medical men have not arisen to a full comprehension of the proper position this branch of medicine has assumed and must assume in the future. Pennsylvania is the third State to undertake its regulation, and has found ready co-operation in its effort amongst the men and women practicing the care of the feet. The people in the field who are already practicing Chiropody and who could show qualifications laid down by the Bureau were granted a license to continue their practice. All others practicing in the State were admitted to an examination in order to demonstrate their qualifications if they had any, and a license was issued to those who were able to pass this examination. For the future, it will be required of every person wishing to practice Chiropody in this State to enter a State licensing examination and demonstrate his proper qualifications after having presented evidence of a preliminary education equal to a two years' high school course, and after having completed a course of instruction in a school of Chiropody approved by the Bureau of Medical Education and Licensure, giving a course of eight months' actual work and sufficiently comprehensive, in Anatomy, Physiology, Hygiene, Pathology, and the practice of Chiropody. An effort has been made, and will continue to be made, to establish a school of proper standard for the teaching of Chiropody in this State on similar lines to the School of Chiropody of New York City.

The Bureau has recently taken up the subject of Optometry, and has established a regulation and licensure for this branch of medicine. The practitioners in the field have been taken care of on similar lines as have been the other branches of medicine. The future standard of education for any one wishing to practice Optometry in this State will be the submission to the Bureau of evidence of a preliminary education that is not less than two years in a High School, not less than two years' Optometry work in the office of a licensed Optometrist, and not less than two years' instruction in an approved Optical School

or College, and finally the passing of a State examination held by this Bureau, this examination to include Anatomy, Physiology, Practical and Theoretical Optics, and practical work in Optometry. In view of these requirements, it is most desirable that Pennsylvania have a school of her own on this subject, similar to that of Columbia College of New York and the one just established at the Ohio State University. Efforts will be made in this direction.

Of course, all of this has not been accomplished without a good many heart-burnings, bitter dissensions, and contentions. But the Bureau of Medical Education and Licensure was established for the very purpose of overcoming these obstacles and bringing peace to a State overridden by contending Medical men of all kinds. Whatever the difficulties to be met, the results have been secured, and the troubles of securing it are things of the past, or at least almost so. There are still a few rumbles of dissatisfaction largely from incompetents who have been forced to seek other and more congenial fields of labor. These are rapidly becoming fewer. Pennsylvania practically stands today at the point to which the Bureau of Medical Education and Licensure has labored continuously to bring her, namely, the cleanest State medically in the whole country, if not in the world, with a future which insures the public of the State the service of men properly educated in all and every branch of medicine and in the accomplishment of this there has not been sacrificed to the people a single element of good which may exist in any of these branches. In fact, they have all been put on a plane from which the people practicing them will be able themselves rapidly and scientifically to develop the good that is contained in them, and in doing so, will add their contributions to the sum total of medical knowledge and will rapidly eliminate therefrom those portions which are based upon ignorance and superstition.

No one expects perfection, much less the Bureau of Medical Education and Licensure, and we are not at all sure that perfection is a good thing. Human nature itself is not perfect, and it is absurd to ask for a member, that which the parent body does not possess. We do believe, however, that we have reached as near perfection in these matters as it is possible for man to come at this time, or at any rate we have laid a solid and firm basis on which those of the future may build and reach a higher plane of perfection.

The Bureau has felt that a plain statement of these accomplished facts, and the reason for and the manner of their accomplishment was due the public and the medical profession in all its branches; hence this paper. What the future may hold forth is of course uncertain, but it is sufficiently bright to far exceed anything of the past, or anything which might have been hoped for in Pennsylvania in the beginning of the year 1911.

STATES IN RECIPROCITY WITH PENNSYLVANIA.

Vermont	Missouri
Delaware	Arkansas
Indiana	Virginia
Nevada	West Virginia
Louisiana	Minnesota
Wisconsin	District of Columbia
Colorado	California
New Mexico	Iowa
New Jersey	Tennessee
Maryland	New Hampshire
Georgia	Kansas
Ohio	Kentucky
Wyoming	North Carolina
Michigan	Utah

HYALIN BODIES OF THE OPTIC DISC IN A CASE OF RETINITIS PIGMENTOSA.—The case was that of a male twenty-five years of age in which semi-translucent excrescences were found at the disc border in each eye. The diagnosis of retinitis pigmentosa had been made when he was thirteen years old. The patient was the fifth child of a family of six—four sons and two daughters. He was well nourished but distinctly below the average in mental capacity and somewhat deaf. There was no trace of syphilis about him or any member of his family. The ophthalmoscopic examination showed the media to be clear with degenerative processes in the retina extremely well marked, as evidenced by the amount and distribution of the retinal pigment. In the right eye were two translucent masses, one on each side of the disc, the edges of which they overlapped. each approximately one fourth of the circumference of the disc in length, and separated above and below by an equal length of disc margin. When the bodies came into relation with the blood vessels, the latter coursed beneath the former. In the left eye there were six masses of similar appearance but of a different shape. They appeared to project into the vitreous from 6 D to 10 D, the larger ones being more prominent. He compares the surfaces with that of a minute, closely knit cauliflower.—*George H. Oliver in the Ophthalmoscope.*

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Bureau of Homoeopathic Institutes and Clinical Medicine

PNEUMONIC FEVER: SOME CLINICAL ASPECTS.

BY

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WHEN we consider the high mortality rate of pneumonic fever also the fact that the disease is no respecter of age or person and that statistics show that between four and five persons out of six, over sixty years of age die as a result of a pneumonic condition, an early recognition of the disease is extremely important.

To recognize disease in its early stage one must be thoroughly cognizant of its clinical course with its many manifestations and variations. The writer is convinced, as a result of considerable clinical experience, that diagnostic acumen cannot be developed without being conversant with the above facts. To be ignorant of them allows disease to reach such stages that the merest tyro is capable of making a diagnosis.

Hence it does not seem amiss to consider some of the clinical aspects of pneumonic fever with special reference to the early recognition of the disease.

Let us presume, a person seized with sudden chill, rise of temperature, sharp stitching pains in chest, cough, rusty sputum, and disturbed respiration-pulse ratio. A corroboration of physical signs hardly seems necessary for a diagnosis; but experience teaches that all cases are not so frank in their manifestations. Any of the supposed pathognomonic symptoms or physical signs may be wanting. We as physicians who have

been trained to look to the lungs and the lungs only for evidence of pneumonia, will frequently be in doubt as regards a diagnosis. For what reason? For the reason that physical signs are wanting. Musser and Norris have shown at autopsy, and by bacterial examination that general pneumonic infection may occur without any distinct localization in the lungs.

It appears, from this well founded fact, that a careful examination both clinical and physical, is positively necessary to establish a diagnosis. This statement is especially true at this time of the year when influenza is becoming prevalent, preparing the soil for infection and developing what has been termed "Grip Pneumonias." This type is frequently characterized by absence of physical signs, for four or five days or more, and one must rely on the associated clinical manifestations to make a diagnosis of pneumonic fever in contradistinction to influenza. Practically all of these cases prove themselves to be unrecognized pneumonic fever, with the presence of leucocytosis from its onset, as opposing influenza.

Abdominal pain is not an uncommon symptom in the early stage. Seen frequently in children and in young adults, very closely resembling appendicitis. It is my routine practice to examine all such cases for evidence of a pneumonic condition, or diaphragmatic pleurisy when the condition simulates appendicitis. A differentiating point has been stated that the rigidity of the abdominal muscles is absent in pneumonia, in contrast to appendicitis. This fact I do not feel is well substantiated, for I have seen cases of pneumonic fever with marked rigidity.

Meningeal symptoms are frequently misleading and the younger the subject the more likely are they to be prominent ones even to the point of convulsions.

An onset with delirium has come under my notice several times. Both cases being looked upon as delirium tremens. A study of the delirium showed it not to be of the type associated with delirium tremens, with its excitement, anguish and apprehension but of the apathetic type of acute infectious disease. Hence it is not a bad plan to look upon such a type of delirium without any positive or assignable cause as being due to a pneumonic process, or at least should invite an examination of the lungs.

An onset with tonsillitis, while not very common is not as rare as supposed. It has been my fortune to see three such

cases in consultation. It may be stated that all cases of tonsillitis which run a prolonged course, and do not prove to be diphtheria of a rheumatic manifestation are frequently associated with a pneumonic process. This type of case is prone to develop suppurative conditions of the lung, empyema of the pleural cavity or general septic state, with usually a fatal termination.

Earache although not a common condition, at onset, if associated with disturbed respiration-pulse ratio, should invite an investigation of the chest. Such a case came under my observation, the only history obtainable was the presence of an earache, for several days. The increased respiration rate attracted attention and a physical examination of the chest revealed a well-marked pneumonic condition.

Free hæmoptysis as an initial symptom is rare. Such a history practically spells tuberculosis, this type usually running a rapid fatal course, the lesion usually being found at the apex. This apical type, even if not tuberculous, should always be suspected with very sudden onset, hyperpyrexia and delirium. In fact that severity of the symptoms are out of all proportion to the size and extent of the lesion. In contrast to this type is the senile pneumonia. Here we have a perplexing and misleading type of the disease. The clinical history is of the utmost importance which usually shows an aged subject, history of bronchitis, more or less acute, gradually increasing prostration, little or no fever, evidence of cardiac weakness and a low leucocyte count. This evidence is practically sufficient to make a diagnosis without the physical signs.

An increase of the respiration-pulse ratio should always invite an examination of the lungs. In children this is usually marked even to the point of one to two. The absence of such increased ratio should not deter us however from making an examination of the lungs. I have observed a few cases in which the respiratory rate did not increase above twenty-two per minute, yet examination revealed well marked consolidation of the lungs. Two of these cases were what may be termed central pneumonia (for want of a better name), and the third a case of supposed delirium tremens, which was treated as such on account of an alcoholic history and presence of delirium. Pneumonia not being suspected on account of a practically normal respiratory rate.

The examination of the sputum reveals little; the simple

presence of the pneumococci without other clinical evidence or physical signs means nothing. Here let me decry the diagnosis of pneumonia made upon the presence of a few pneumococci in the sputum without other clinical evidence. The time has not arrived as yet when we can sacrifice clinical observation and depend wholly upon laboratory methods for a diagnosis.

The blood furnishes valuable diagnostic as well as prognostic evidence. The presence of a leucocytosis excludes such conditions as malaria, typhoid, uncomplicated influenza, tuberculosis and non suppurative conditions. From a prognostic standpoint it can be stated that the higher the leucocytosis, the more favorable the prognosis. In fact it has been claimed that cases exhibiting a leucocytosis of thirty thousand or more, rarely have a fatal termination regardless of the severity of the infection.

In close relation to the blood is a study of the blood pressure. This has a prognostic and therapeutic value of great importance. It may be expressed as follows:

When the systolic blood pressure expressed in millimeters of mercury falls below the pulse rate expressed in beats per minute, a fatal termination may be looked for. This is true with few exceptions. A difference of seventy or more between the systolic and the diastolic pressure also bespeaks a fatal ending and is evidence of vaso-motor paralysis.

From a therapeutic standpoint, I am convinced that it is the best guide we have as to when to stimulate and how much to stimulate. These facts I have fully confirmed for myself and reported same before this society two years ago in a paper entitled "The Relation of Blood Pressure to Pulse Rate in Croupous Pneumonia—Its Clinical Values."

The presence of herpes labialis, should direct attention to the lungs when occurring during the course of any febrile condition. This occurs in a large percentage of cases of pneumonic fever and quite early. In fact my attention has been directed more than once to the lungs as the primary condition by the presence of herpes. The occurrence of this lesion has been pointed out by certain observers as offering a favorable prognosis; some going so far as to state that they have never seen a fatal ending in cases exhibiting this manifestation.

Keeping before us the many and varied aspects that pneumonic fever may present, we seek the aid of physical signs

to complete and confirm our diagnosis. Mensuration means little. Inspection may reveal limitations of movement on the affected side with a compensatory increase of movement upon the opposite side. Palpation is of little value except for a large lesion when peripherally located.

Percussion, outside of dullness in the stage of consolidation will leave us much in doubt, especially in the early stage and when the process is centrally located. Auscultation then gives us the most reliable evidence. In the early stage the crepitant rales associated with a feeble respiratory murmur; later becoming bronchovesicular and finally bronchial or tubular, with increased vocal resonance to whispered or spoken voice, completes the picture. Such signs are more or less typical and easy of recognition, but it is the atypical that concerns us most. I will not attempt to consider all of the atypical physical findings which may occur but to point out the physical signs in that type where the consolidation is centrally located, or as the result of pressure or altered secretion, occlusion of the bronchial tubes takes place.

This type is frequently overlooked on account of the atypical findings. The important point I wish to emphasize is the *quietness or diminution of all physical signs upon the affected side*: there is limited motion, a suppressed or markedly diminished respiratory murmur, increased vocal resonance if present is distant and muffled. Such a lung gives to the ear a perfect physical picture of *quiescence*. The opposite side of the chest is the reverse, increased excursion, exaggerated respiratory murmur (puerile breathing), not broncho-vesicular breathing. In other words, a compensatory condition. One word of warning at this point: Do not mistake your exaggerated respiratory murmur for broncho-vesicular breathing, and diagnose a pneumonic process upon the unaffected side. If attention is paid to the duration and pitch of this type of breathing such mistakes should not occur.

From the facts presented it can be seen that the diagnosis of pneumonic fever may be very easy, or very perplexing especially where a case is encountered when complications have arisen. The common complications that must be kept in mind and continually looked for are those of pleurisy with effusion, empyema, including interlobar type, abscess of lung, tuberculosis, pulmonary infarct, pulmonary congestion peri- and endocarditis and unresolved pneumonia. Probably the most common

complication is that of pleurisy with effusion. Its diagnosis seems apparently easy, yet I have seen the question frequently arise as to whether we were dealing with an effusion or an unresolved consolidation. In all such cases an exploratory puncture with a sterilized hypodermic needle should be made to establish the diagnosis, whether consolidation or effusion exists and its character.

The use of this simple and harmless procedure is not often enough resorted to which will frequently recognize an early empyema, before the clinical evidences are sufficient. This will save our patient much suffering and consequent useless lung tissue.

THE PRIVATE TREATMENT OF THE CURABLE INSANE.

BY

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WHATEVER views one may entertain relative to the finality of modern classifications of insanity, and the general pessimism concerning measures for its cure, the fact remains that a goodly number of the mentally unbalanced get well and stay well, both in private and in institutional practice. The position of a consultant summoned to a case of recent insanity is a peculiarly delicate one and, because of the general household distress, the family often requires treatment quite as time-consuming as that given to the patient. In the general commotion one is expected to immediately answer the questions: Will this patient recover? If so, how soon? What measures are necessary to bring about a cure? Questions not always easy for one who hesitates to conceal our normal prognostic uncertainties under the cover of egotistic bluff and bluster and then take chances on the outcome.

With a given case of a type known to be recoverable, there are a number of items to be taken into consideration in making a disposition of the patient. The first of these is the matter of expense; and this effectually disposes of the majority of the insane, making institutional care imperative.

It is in the smaller number of cases, where the item of cost is no object, and where the deep-rooted and unwarrantable odium which thereafter is attached to a patient who has once been in an asylum, is to be avoided, or where there is prejudice

against institutions because of possible neglect or cruelty on the part of caretakers, or where there is fear that association of the patient with others similarly afflicted will have an unfavorable influence; or where there is a feeling that because of large numbers of cases gathered in institutions, there is a diminished chance for individualization in treatment. How true this may be is perhaps an open question, but I think it is safe to say that cases requiring psycho-analytic or psycho-synthetic methods, and cases requiring special plans of training take too much time for treatment in large institutions.

These observations constitute no reflection upon my worthy colleagues who are concerned largely with institutional care of the insane. Indeed their's is the major work and upon them must fall the special difficulties of handling the great bulk of cases in a manner which does not obtain in purely private practice. The average so-called private sanitarium in my neighborhood, when not entirely worthless, is open to the same general objection as the large asylum; and most of the sanatoria are equipped only for custodial and not for curative care. I have been in beautiful, well located and expensive institutions where an absolute donothingism pervaded the whole place.

These, and other considerations make it necessary for us to provide other means for the private and individual treatment of a certain number of cases of insanity which come under observation. For this purpose it has been my custom to place them among private families, suburban, or even in the cities. The disadvantages of this are, of course, the expense, and the fact that this plan is not always feasible in the more violent and maniacal types. The advantages are, first the absence of publicity (and one could point to a goodly number of persons who have gone away for "neurasthenia" or a prolonged "rest cure" who were in reality insane, but now fully recovered without even the friends of the family having knowledge of it).

Second, the manner of nursing and the choice of diet are fully under the control of the attending physician. Too great emphasis cannot be placed on the selection of nurses for this work. Third, there is no contact with other patients. Fourth, the cases, by reason of their smaller numbers can be individually studied and individually treated.

The principles of treatment in the curable insane include a

removal of the patient from the environment under which the condition developed and more or less isolation from the people who were a part of that environment. The diagnosis and treatment of collateral lesions, often requiring the collaboration of specialists outside of the field of psychiatry. The careful and detailed attention to the patient's nutrition. Rigid precautions against suicide in the types known to be suicidal. Occasionally the employment of psycho-therapy, perhaps in its more modern phase of psycho-analysis. The planning of suitable employment or occupation and the prescription of a medicine. Concerning the two latter there is something to be said in detail. Certain patients should be actively and systematically employed. To this end I have engaged the services of neighboring cabinet makers and other craftsmen, even going so far as to put a patient in a machine shop for daily work with a nurse in attendance. At the present time, I have a patient, a boy, with dementia præcox who was previously in an expensive sanitarium where his chief occupation was to sit in a nicely furnished room and watch his nurse read. This boy is now under private care being drilled in all kinds of manual work. He is kept busy with objective employment and, although I am skeptical about an ultimate cure, the improvement in a few weeks is most remarkable.

In the matter of medication, it has been my observation that physicians of our school are more reckless in the administration of sedative and other drugs than are the skilled prescribers of the allopathic school. In fact, the old school alienist is rather shy on drugging, depending much more on the continuous hot bath and similar measures. Personally I have tried or observed the trial of a lot of physiological drugs and, as a result of this experience, it is now many years since I have administered even a simple palliative in insanity. There is yet much to be desired in the purely medicinal treatment of the insane and the future may bring some specifics, but at the present time the very best thing we have in any school is the method of Hahnemann. It takes time and patience to collate the symptoms and search in the materia medica and repertories for the proper remedy, but the experience and observation of a good many years have convinced me that this expenditure of time is well worth while.

BUREAU OF OPHTHALMOLOGY, OTOTOLOGY AND LARYNGOLOGY

NECESSITY OF ROUTINE IN OCULAR EXAMINATION.

BY

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It is absolutely necessary to become a routinist in eye work. Routinism is a time saver. Routinism protects one in law-suits and avoids the possibility of overlooking anything important.

By routine is meant the regular systematic history taking as in any other work, the examining of the face in determining the symmetry of the orbits and their contents, the eye-brows, eye-lids, eye-lashes, palpebral and bulbar conjunctiva, cornea, sclera, iris, pupils, tension, muscles, anterior chamber, lens, fundus, fields, vision and refraction.

A systematic history should include places, name, address, race, sex, age, occupation, place of birth, place of residence, environment, hygienic surroundings, whether single, married, or widowed, history and subjective symptoms of present eye ailment, history and subjective symptoms of previous eye ailments, supplemental questions during the last three questions in order to clear up and complete the record, family history including history of the mother and her family, the father and his family, of the sisters and their children, of the brothers and their children, and the personal habits of the patient.

The vision should be taken the very first day of the examination of an eye case. The standard methods should be used in the taking of the same and the pin-hole test should not be omitted. Taking the vision before touching the eye is exceedingly important. Patients may claim that they had better vision the first day if the same is not taken until a subsequent visit. They may also claim that they had better vision where the case is handled before the taking of the vision. The vision should be taken in every eye case. Of 779 high-school students examined only as to the acuteness of vision, 34 per cent. were found to have visual defects.

The taking of the field of vision and color sense should fol-

low that of the vision. Habitually done reduces the time required in the doing of the same to a minimum. The better habit is to take both.

Pupillary reaction to light and to accommodation is the only means of acquiring a knowledge of the condition of the intrinsic muscles of the eye. Test of the extrinsic muscles should follow this. Failure of the taking of the first accounts for some unrecognized synechia, of the second many an amblyopic eye.

Failure to inspect the lids may mean the over-looking of a beginning ptosis; of its edges, a mild blepharitis marginalis squamosa.

Many a foreign body is left on the palpebral conjunctiva because the upper lid is not everted.

The discharge causing the agglutination of the lids may be caused by a sub-acute or chronic dacryocystitis or a refractive error. The lacrymal ducts may not be directed against the eye-ball. Pressure over the lacrymal ducts may cause a regurgitation of pus or muco-pus indicating an involvement of the lacrymal sac or a stenosis of the nasal duct.

Pinguecula and pterygium should be well examined and the record noted that in the future diseased condition of the same eye a conjunctival injection may not be mistaken for an episcleritis.

Ciliary flush and ciliary injection accompany many conjunctival injections. Failure to move the conjunctiva about may cause one to confound a conjunctivitis with a ciliary injection and vice versa. Failure to palpate over the region of the ciliary body may cause one to overlook a cyclitis where the ciliary injection can not be seen for the marked engorgement of the conjunctival vessels.

As to the cornea, careful examination with oblique illumination, the corneal loupe and the ophthalmoscope, of the surface, margin and substance will give one knowledge of its condition except where partial or complete opacity is present. A writer reports that in one case, a portion of the shell of a minute seed stuck upon the cornea had remained there several days; that the results of the presence of foreign bodies on the cornea have been mistaken for ophthalmia neonatorum; and also that arcus senilis has been mistaken for an active pathological condition. One should be on the alert for the results of the effects of cocain upon the cornea as the effects may mislead one to

consider a number of pathological conditions of the cornea.

The anterior chamber as to its depth should be noted. Its shallowness alone may promptly suggest the pathological condition and diagnosis. It is well to state here that the same writer as above quoted reports cases of glaucoma which have been mistaken for cataracts and of other cases of glaucoma which have been mistaken for iritis.

Making the color of the iris a matter of record will assist very much in the subsequent examination of eyes containing a foreign body as the substance within the eye may cause a change in the color of the iris. Where the pupil reacts very slowly it is best studied with the ophthalmoscope.

The taking of the tension is in order at this point for upon it and the preliminary ophthalmoscopic examination depend whether or not the cycloplegic is to be used. The thorough examination of the lens under a cycloplegic, providing there are no contra-indications, should include the anterior and posterior poles and the substance of the lens.

A complete ophthalmoscopic examination of the eye should include besides the cornea, anterior chamber, and lens, also the vitreous, the nerve head, vessels, retina, macula and their condition. Where the complete status of a patient's health is desired such can not be had without a fundus examination.

Routinism in other lines of work may not be so necessary, but because of the many parts of the eye and the consideration of each part separately and together at length, thoroughness and accuracy necessitates routine in ocular examination.

TYPHOID CHOLECYSTITIS.—Gall-bladder inflammation, in the absence of lithiasis, may produce the same symptoms and signs as occur in cholelithiasis. Thus in typhoid cholecystitis there may be no history of typhoid fever, no record of any exposure to infection, and yet serious illness result. In many of these cases the Widal reaction may be negative, and the course of the illness can only be cleared up by the operation and a bacteriologic examination. The symptoms in typhoid cholecystitis do not always refer to the gall-bladder. The chief symptoms are a feeling of malaise and sickness, with a slight evening rise of temperature (99.5 deg. to 101 deg. F.) and occasional attacks of pain accompanied by rigidity of the abdominal muscles not always localized to any special area. These attacks, if severe, occur regularly every third or fourth day, are accompanied by vomiting and fever, and are followed as the temperature increase subsides by copious night sweats. If during the attack, or after the acute pain has passed away, muscular rigidity is not pronounced, the gall-bladder, sensitive to touch and more or less distended, can be palpated.—*Morrison—British Medical Journal.*

ACUTE CIRCUMSCRIBED EXTERNAL OTITIS.

BY

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It is a clinical fact that the spring and autumn are the seasons for boils and carbuncles; and those who attend aural clinics have no doubt observed, that during these periods, the greater number of cases of furunculosis of the external auditory canal occur.

This simple inflammatory condition of the external canal is one of the most painful, and, at times, most troublesome conditions which the aurist is called upon to treat. It is frequently associated with such constitutional disorders as diabetes, chronic kidney disease, gout, rheumatism and tuberculosis. Cases resulting from local trauma are in the majority, and this is usually self inflicted injury, the patient using some small instrument such as a hair pin, match stick, or ear curette to scratch the canal, or remove cerumen. The instrument used causes a break in the epithelial lining of the canal and permits infection to pass into the tissues. This occurs, usually through a hair follicle or sebaceous gland or through a number of glands. Occasionally, boils develop in the canal secondary to an otitis media, either acute or chronic. Here the infection occurs through maceration of the epithelium by the excoriating discharge from the middle ear. Furthermore, acute external otitis is observed in two types of individuals,—in the plethoric, sthenic, individuals, and secondary,—in depleted patients—who have overworked, are worried, have poor appetite, do not sleep well—or in victims of some constitutional disease which is a constant drain.

The symptoms presented by this condition are: throbbing pain, usually referred anterior to the tragus. The pain is aggravated by motions of the jaw, pressure upon the area in front of the ear, or any manipulation of the auricle. These patients refrain from eating solid food because of the pain occasioned by the act of chewing. They furthermore shield the ear with the hand. If the patient is confined to bed, he will not lie on the affected ear, as in case of acute otitis media, but will lie on the unaffected ear because contact of the pillow with the affected ear causes pain. The pain becomes more and more severe as swelling increases and tension becomes

greater. As the lumen of the canal is encroached upon, the hearing becomes dull and there is stuffiness and tinnitus aurium, usually of a ringing character. In some cases prostration is marked, they cannot sleep on account of the intense pain and will not eat because of suffering; these factors tend to intensify the prostration. There is one other symptom which we have purposely left until last to emphasize it, namely intense itching in the canal; this symptom preceding all others. We have been able to elicit this in a very large percentage of cases and have come to look upon it as a rather valuable differentiating symptom.

Upon examination of these cases, one will find upon palpation, great sensitiveness of the preauricular region as well as upon manipulation of the auricle. This procedure will with the greatest certainty elicit pain if there is a furuncle in the canal. Upon inspection with reflected light, greatest gentleness must be observed for usually the slightest manipulation of the external ear causes marked aggravation of the suffering. The light should be thrown upon the external meatus and, while carefully grasping the pinna, very gentle traction is made upward and backward. The canal should be inspected as far as possible without a speculum. If this precaution is not observed, and the speculum introduced at once, the instrument may be pushed against an acutely inflamed area causing unnecessary suffering to the patient. Early in the condition, one may be unable to locate the infected area. Under these circumstances, a blunt probe used carefully, palpating the walls of the canal, will reveal the sensitive area or areas. Later in the condition, the distinct swelling will readily be seen; and, if rupture has not taken place there may be fluctuation. If rupture has occurred, a small crater will be seen through which pus may be expressed.

The position of the furuncle will determine the occurrence of involvement of the surrounding tissues. If the boil is located on the anterior wall, there will be swelling of the tissues in front of the ear, and at times the parotid gland will be swollen and very tender to palpation. If the process occurs on the posterior, or posterosuperior canal wall, oedema will occur in the soft tissues over the mastoid; and, at times simulate very closely the post auricular oedema of an acute mastoiditis—obliteration of the post auricular groove and downward and forward displacement of the auricle. In other

cases, the infection may involve the deeper structure of the pinna causing a perichondritis with swelling and obliteration of the depressions of the pinna. Occasionally, the lymphatic glands, anterior and posterior to the sterno cleido mastoid muscle, become swollen and tender. Rarely, the suppurative process may extend deeply into and involving the cartilage or bone. Great care must be exercised in these cases to prevent atresia during the process of healing.

It becomes necessary where the furuncle is on the posterior, or postero-superior wall of the canal, with post auricular œdema and displacement of the auricle, to differentiate this condition from post auricular œdema of acute mastoiditis.

Post auricular œdema due to furunculosis of canal:

Usually preceded by itching in external canal.

Manipulation of external ear or palpation anterior to ear causes pain.

Palpation of mastoid over antrum tip, or emissary vein, if made with care not to disturb pinna will not cause pain. The tissues will pit on pressure but there will be no bone tenderness.

The drum membrane is usually intact, may be normal or slightly injected.

Post auricular œdema due to acute mastoiditis:

Not preceded by itching in canal.

Manipulation of external ear, or pressure over pre-auricular region does not cause pain.

Deep palpation over the antrum and mastoid tip will elicit tenderness.

There is usually a history of a preceding aural pain with a discharge of serum, or mucous or combinations, or muco pus, before the appearance of the post auricular œdema.

However we may outline the points in differential diagnosis, there are cases which are most confusing and in which only most careful watchfulness and frequent painstaking examinations will enable one to exclude the involvement of the mastoid. Xray examinations in doubtful cases will help in a differential diagnosis. Every aurist has, within his experience, seen cases where the two conditions occurred hand in hand. One point which has been very useful to us in some cases where the drum cannot be inspected, has been the hearing test. The hearing test with whispered voice is performed in the usual way and the result noted. If possible, a small aural

speculum is then introduced into the canal, beyond the obstruction) and the whisper hearing test again made. If there is a marked improvement in the hearing with the speculum in situ, it argues against an involvement of the middle ear.

The prognosis of these cases is gloomy as regards the course of the case, for recurrences are very frequent and the patient who has one boil in the canal, can, in a large percentage of cases, look for another, or more. The reason for this is quite readily appreciated when one considers the anatomy and histology of the canal. The presence of a constitutional depleting disease is also responsible for the multiplication of infections.

One has to but pick up half dozen text books by different aurists, and read the treatment of acute circumscribed external otitis to appreciate the lack of real effective measures in handling these lesions. We have come to the conclusion that these patients are distinctly house cases; and, in private practice endeavor to have our patient submit to absolute rest.* In hospital work, we advised ward care. This harbors the patient's strength and takes care of the prostration. Having the patient under control, it is important to see that elimination is adequate. The alimentary canal is activated by divided doses of calomel, one tenth grain every fifteen minutes for ten or a dozen doses. The urine is examined for evidences of kidney lesions or presence of glycosuria. The diet is ordered according to the case in hand. A depleted exhausted individual will require a carefully selected nutritious easily assimilable diet; while a plethoric individual will get along better on a restricted diet. Of course, in the presence of glycosuria, or evidences in the urine of kidney changes, diet suitable to the case will be prescribed.

The use of vaccines in the treatment of furunculosis is rapidly making a place for itself especially as a means of preventing recurrences. While there are reports of using vaccine early in the condition with resulting abortion of the condition, the cases, unfortunately, come to us so late that this happy result is not so frequently observed. The large majority of cases of furunculosis will, upon culture, yield staphylococcus aureus; and, if we are going to use a vaccine scientifically, an autogenous vaccine is necessary. As it takes at least two days to develop this, the first dose of vaccine must necessarily be a stock preparation. A dose of this is given at once; and, if the case does not improve, the autogenous

vaccine will be ready for use; or, if the culture shows the organism to be the same type as that from which the vaccine has been made, and there has been an alleviation of the symptoms, the stock vaccine may be continued. Our experience with the vaccine treatment has been with stock vaccines and too limited to judge of the merits of this method alone. Furthermore, we have always combined the local measures which have served well ordinarily. It is in the recurrent cases that we look to vaccines for help.

Local treatment should aim to relieve pain, establish drainage and prevent dissemination of the infection. If the case is seen very early, and, upon examination, we are unable to find any definite local signs of a lesion except a sensitive spot on one of the walls, the canal should be carefully cleansed by mopping with pure alcohol. A sterile gauze wick is introduced into the canal and packed rather firmly. The wick is now saturated (in the canal) with alcohol and menthol (a few grains of menthol to ounce of alcohol) by dropping the solution on the wick with a dropper. The patient is given some of the solution and instructed to keep the gauze in the canal moist. If the pain is very intense in this stage, it is good therapy to administer an anodyne of sufficient activity to give the patient rest. Experience has taught us that morphia is a reliable remedy. If the alcoholic treatment is effective, it is continued for a few days, the gauze wick being renewed daily. If, however, the conservative treatment does not bring about relief, and the pain continues, surgical interference is indicated; and it is unnecessary to allow the patient to suffer while waiting the full development of the boil with suppuration. The infected area should be incised freely. This is an exceedingly painful operation and should be performed under nitrous oxide gas, or primary ether. The canal is mopped thoroughly with alcohol and incision is made through the swelling, or through the painful area, down to the perichondrium. We usually permit free bleeding to occur without interference. This, in itself, is of benefit and in cases where there is simply infiltration, the blood letting gives immediate relief; and, as pus forms, it has free drainage. Some form of drain should be used to keep the discharge from lying in the canal or damming posteriorly. Sterile gauze may be used for this purpose. The drain should be changed as soon as it becomes saturated. For the past year, we have been using an aural bougie of

Emplastrum fuscum camphoratum, or brown salve. A small portion of this is molded into the shape of a cylinder of sufficient size to fit into the canal. This is covered with a single thickness of gauze, thus forming a perforated container for the plaster, and facilitating the handling of the bougie. The bougie is placed in the canal well beyond the infected area. The action of the plaster, as we have observed it, has been to relieve the soreness and aching and attract the pus from the tissues and hold it, thus keeping the wound free of secretion. It would seem that the wax would dam up the secretion; but it is surprising upon removing the bougie to find the wound clean, while clinging to the bougie is a quantity of pus. A gauze wick alone will not do this. We have employed this method in a great many cases of acute circumscribed external otitis and have found it quite effective. The bougie is left in situ for four hours when the patient removes it, and introduces a fresh one.

There is one distinct contra indication in treating acute circumscribed external otitis and that is the use of any aqueous solution for irrigation. We are firmly convinced that irrigation with these solutions is productive of no good. It usually does harm either by disseminating the infective material or by causing irritation. This is especially true if an antiseptic such as bichloride of mercury or potassium permanganate is used. Much more can be accomplished by cleansing the canal with cotton mops and alcohol.

After the inflammatory symptoms have subsided, the canal is usually found to be dry and filled with scaly debris. The patients at this time again complain of the itching in the ear. The case is not cured until this has entirely disappeared, and we have normal cerumen appearing on the walls of the canal. To overcome this desquamation, we have found a most efficient remedy in the unguentum hydrarg oxidi flavus. The canal walls are freed of all exfoliating epithelium with a cotton tampon, and then anointed with the yellow oxide ointment. This is carried out every few days until there is a healthy pink smooth epithelial lining to the canal. Shortly, healthy cerumen will appear indicating the return of physiological glandular activity.

BUREAU OF PEDOLOGY**THE PRESENT STATUS OF INFANT PNEUMONIA.**

BY

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THE purpose of the present paper is not to present any new views of my own on this interesting subject of infant pneumonia, but to review some of its familiar salient features, with especial reference to current points of view as gathered from recent literature.

The subject of pneumonia in the early years of life derives much of its importance from the frequency with which it causes death. Brown found that pneumonia caused one-seventh of all deaths during the first year of life, Holt found 322 pneumonias in 726 autopsies on children, or over 40 per cent., and of these 139 were primary pneumonia, which therefore caused 19 per cent. of all the deaths.

Children, as adults, present both the lobar and lobular forms of pneumonia, but the lobar form is rather less frequent, and decidedly less dangerous, than in the adult. The mortality of primary lobar pneumonia is given by Whipman as seventeen per cent., becoming higher as the age is lower, reaching fifty per cent. in the first year, and being least at fifteen years (Brown).

Broncho pneumonia, on the other hand, furnishes an increasing proportion of cases as the age is lower, and has a mortality in hospital cases of about fifty per cent. This is not merely due to the fact that it is frequently secondary, for both primary and secondary broncho pneumonias give this same death rate. The secondary broncho pneumonia following whooping cough has an especially high death rate, approaching seventy per cent. of hospital cases.

We are all familiar with the fact that aberrant forms of pneumonia are to be noted in children rather more frequently than in adults. Attention has been called to the simulation of acute abdominal inflammation at the onset of an acute pneumonia in children. With an acute onset of fever, vomiting, and perhaps chill, tenderness and rigidity of the right

rectus, and possibly no physical sign pointing to pneumonia, it is not surprising that a diagnosis of appendicitis is occasionally made. I have fallen into this error, and assure you it is embarrassing. It is said that the rigidity due to pneumonia can be distinguished by pressure with the flat of the whole hand, when it disappears; and that the fall in pulse—respiration ratio and the presence of cough, will help to distinguish, as no doubt is true; but the danger of confusion is a real one, and cannot always be avoided. While acute suppurative appendicitis is not frequent in young children, in whom only this error is likely to arise, it does occur; and if we wait for the appearance of a mass before operating on the appendix, we are going to lose some of them by the delay. The X-ray is an important aid in recognizing early consolidation, especially in deep locations. "Central pneumonia," meaning a consolidation at no point reaching the surface of the lung, has come to be a standard conception of a disease process. Holt doubts its existence but points out that it may fail to appear at the surface of the chest, through abutting on the spine or high in the axilla.

Pneumonias of short duration occur, in which all the symptoms and physical signs of lobar pneumonia are present, including onset with chill or vomiting, or both, constant hacking cough, "stitch," fever, and physical signs of consolidation: but crisis occurs on the first or second day, and the disease differs in no particular except duration, from the ordinary lobar type. I have seen one such case, in which the initial chill occurred at 1.30 P. M. and defervescence before 7 the next morning, and the frequency of atypical course is indicated by Hayem's finding that 43 out of 51 pneumonias in children ran the typical course. Onset is most often with vomiting (10 per cent. Kerley) and rarely with chill. Convulsions occur in a small proportion of cases. These symptoms are cerebral; but do not necessarily proceed from suppurative processes within the skull. The cerebral manifestations which may be present in lobar pneumonia without meningitis are named by French writers meningisme, and may be so severe as to lead to a diagnosis of meningitis, and the pneumonia overlooked. Meningitis actually occurs, however, and is usually easily recognized. It may, however, be present in pneumonia and fail to present a single localizing symptom. We are accustomed to look upon apex pneumonia as especially likely to be asso-

ciated with cerebral symptoms, but Holt denies the correctness of the impression. We are also inclined to look upon apical pneumonia as especially dangerous, but published figures do not confirm this, and seem to show that lobar pneumonia of one apex has a peculiarly favorable outlook. Pridham reports a case of pneumonia commencing with a definite attack of ear-ache followed by convulsions, retraction of the head, and drowsiness, which cleared up when a frank pneumonia developed. He suggests that the ear may have suffered the initial lesion, and involved the meninges by direct extension. This idea of the pneumonia as secondary to an otitic infection appears to be unnecessary in view of the fact, now well established, that pneumonia—I am speaking of the lobar form—is primarily a pneumococemia, determining usually, though by no means always, in one or both lungs.

It is not unusual, therefore, to find inflammation of the middle ear, meninges, pleura, peritoneum and joints, due to the pneumococcus, whether associated with pneumonia or not, and these complications are to be regarded not as subsequent, but as concurrent, localizations of the general infection.

The same is not true of pericarditis which is usually secondary to empyema, and is even said not to occur without the presence of empyema. (It does, however, occur without empyema.) Acute nephritis has been noted, symptomless, and detected only by examination of the urine, with recovery in each of two cases.

I have seen a child sick for a time with headache, fever, and restlessness; at the end of 36 hours pus discharged from both ears, contained pneumococci in pure culture, but the child remained evidently very sick; and after 24 hours more a lobar pneumonia became evident and ran a typical course to the crisis.

Onset without acute symptoms is rarer than in adults, but occurs.

One girl, ten years of age, came into my office complaining only of a cough, and was found to have a lobar pneumonia which subsequently ran a normal course to recovery. Other atypical forms cited are: pneumonia without fever; without cough; forme eclamptique (Hayem).

Of these the form without cough is the commonest, and sometimes an ordinary case will cease coughing when placed on fresh air treatment in winter. Of the eclamptic type, with

the initial convulsions continuing throughout the disease, the prognosis is especially bad, but convulsions at the onset do not affect the outlook unfavorably. The prognosis is definitely worse with higher temperature, with extensive involvement, and with the presence of complications. An extraordinary prognostic value is noted and confirmed by several observers, for the ratio of blood-pressure to pulse-rate, and will be considered in a few minutes.

So far we have been discussing the lobar form of pneumonia. Primary Broncho-pneumonia is more frequent, though not over-whelmingly more frequent, in children up to three or four years of age, after which the lobar form is more common. In contrast to the very favorable outlook in lobar pneumonia, broncho-pneumonia carries a high death rate at all ages, and this regardless of whether primary, or secondary to another disease. The varied bacteriology, and usually asthenic course of broncho-pneumonia suggest that it may be a secondary ailment oftener than we are able to recognize.

The researches of Pässler have called attention to the study of the mode of death in pneumonia. Cardiac death occurs, but much the more frequent is vasomotor failure.

"The circulating poisons of the disease paralyze the vasomotor centers in the medulla, and the vasomotor function of the splanchnic nerves is inhibited with results similar to their section. The vessels of the splanchnic area dilate and blood pressure falls. The heart, inadequately supplied with blood, gathers it from other parts of the body, including the central nervous system. Finally the quantity of circulating blood becomes so small, and intra-cardiac pressure so low, that the heart ceases to contract."

Butler states that the death rate from pneumonia in Bellevue was reduced 10 per cent. when the routine use of alcohol and nitroglycerine (vaso-dilaters) was stopped.

Gibson found that an extraordinary prognostic value may be attached to the ratio between pulse-rate and blood-pressure, showing that in adults having pneumonia, patients whose blood-pressure fell below the pulse-rate rarely recovered, while those whose blood-pressure remained above the pulse-rate rarely died. This is fully confirmed by studies of Goodman and Pitman, Gordon, and Hare, and emphasizes the importance of vasomotor failure as the proximate cause of death, and of vasomotor support as the essential element of treatment. It

further supplies a rational explanation for the favorable results of treatment by cold fresh air, by bathing, and by counter-irritation. The treatment by cold fresh air, now nearly universal, was described and recommended by V. Juergensen in 1875 in a manner that leaves little to be added.

A recent experimental study of great importance, on the effect of cold fresh air on blood-pressure in the pneumonia of children, shows that removal into cold fresh air causes an almost immediate rise in blood-pressure which is sustained so long as the patients are kept out doors, while removal indoors, causes the blood-pressure to fall and remain low so long as the patient remains in. This effect is found from cold fresh air, during the course of pneumonia, but is not gotten in warm weather, and the results on convalescents are much less striking.

Fresh air is the most important single element of treatment. Nothing can be more striking than the change in the comfort and appearance of the patients on removal from the cradle before the stove in the kitchen, to a bed in a room widely opened. Respiratory distress and cough are most affected. I have repeatedly seen cough cease entirely. I regard this item of treatment as so essential that I am willing to forego baths, mustard packs, and mustard inunctions, if the weather is very cold, rather than remove the patient to a warm room or close the windows. It is necessary in every case, in private practice, to instruct the nurse how to clothe herself, for a room comfortable to a child with fever may be very chilly indeed to the nurse. Unless prevented by arctic weather, frequent cool bathing is desirable. Children will not tolerate very cold water, and the bath is to be given at ninety-four degrees, and reduced two degrees at each bath, until the patient complains, when the temperature is not to be further lowered.

Oxygen has its advocates and its enemies. I prefer to use it not only when the patient is cyanotic, but early and in large quantities in asthenic cases. Antipyretic drugs do more harm than good. Whether the quinine treatment will prove of value is not yet certain.

Stimulation is frequently necessary, but it is not the heart that needs it. Since it is vasomotor failure that threatens the patient, it is the vasomotor system that needs stimulation. I have already pointed out the vasomotor effect of cold air, and it is to its vasomotor effect that I attribute the favorable

results from the early and moderate use of digitalis. This seems to have been recognized by Fraenckel. Many object to digitalis but most of these appear to me to have used too large doses. Expectorants are rarely useful. Alcohol is recommended by high authorities, but it is a vaso dilator, and I have stated that a 10 per cent. improvement in the death-rate at Bellevue has been claimed when alcohol and nitro-glycerine treatment was abandoned.

As the danger of lobar pneumonia in children lies largely in the complications, the experimental studies of Shattuck have considerable interest. He attempted to prevent empyema by the early and continued administration of hexamethylene, and while the incidence of empyema and the mortality were not favorably affected, the other complications of otitis media and pericarditis were entirely absent from the cases given the drug, while present in each series of control cases to the normal extent of $1\frac{1}{2}$ to 5 per cent. for pericarditis and 3 to 4 per cent. for otitis.

Biological products have been in use now for some years, but do not demonstrate the striking results seen in some other infections. The printed evidence leaves the use of serums still in the experimental stage. Success has been reported in pneumonia with delayed resolution and in pneumonia migrans from the use of a vaccine, and vaccine should be used, in my opinion, in cases tending to become chronic, whether lobar or broncho-in type.

All our conclusions as to results of treatment must be made, however, with full recollection that the mortality of lobar pneumonia in children is very low, and the termination usually by crisis.

Lobar pneumonia, as well as broncho-pneumonia, may occur as secondary to other diseases. Rolleston reports on 40,000 cases of diphtheria, in which were found 0.38 per cent. lobar, and 1.12 per cent. broncho-pneumonia; and adds 1000 personal cases, in which he found 0.7 per cent. lobar, and 1.5 per cent. broncho-pneumonia. Lobar pneumonia has also been noted secondary to measles.

In lobar pneumonia, because of its short course, feeding is of comparatively little importance, as the attack is over before much emaciation can occur. In broncho-pneumonia, on the other hand, and especially in infants, the feeding is so important as to make the management of the case very largely a

feeding problem. Sufficient nourishment must be gotten in to maintain the strength and the digestion must not be upset. The material fed must be suited to the age of the patient, and the usually enfeebled state of the digestive organs makes it necessary to observe strictly regular hours for feeding. I wish to lay stress on the necessity of allowing sufficient time to elapse between feedings. Too frequent feeding is the error most easily fallen into, and the frequency should not be greater than for a healthy child of the same age.

The bearing of tuberculosis on the occurrence of broncho-pneumonia is of very great interest. Royer, at the Municipal Hospital in Philadelphia, found it common to recognize acid-fast bacilli in smears from the lungs of children dying with broncho-pneumonia complicating other infectious diseases, and notes the absence of the tubercle as it occurs in adults. Sturtevant, in 250 autopsies on children, never found gross tubercle formation, but found miliary tuberculosis in five cases, all of these having presented the symptoms and physical signs of broncho-pneumonia. Fishberg, however, states that in infants the tubercular foci in the lungs are of comparatively greater extent than in children over four years of age; they run an acute course and lead to rapid cavity formation, soon terminating fatally.

We may infer that the relation is twofold; that miliary tuberculosis is easily mistaken for broncho-pneumonia during life, and that the presence of tuberculosis may predispose to the occurrence of an ordinary broncho-pneumonia. In any event, tuberculosis must be prominently before us when dealing with respiratory infections in children, both as an etiological factor, and as a frequent and dangerous sequel.

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DISCUSSION.

DR. W. G. DIETZ, Hazelton: To discuss such an excellent paper as this, what may be called the natural history of the disease as it occurs in children, is almost impossible. There is very little to be said on this subject by the general practitioner. Dr. Boyer has gone into the subject so thoroughly that all I can do is to compliment him and to felicitate the Society on having been presented with such a paper.

As to pain in the lower right abdomen, especially as it occurs as an early symptom, both in the child and in the adult, I would say that it is only within the last year or two that the subject has come to my attention. It was forced on me by a case that I took, at first, to be appendicitis. The symptoms were not of a nature to call for urgent operation, but there was rigidity of the right rectus muscle. I cannot say now whether this rigidity could have been distinguished from that found in appendicitis by applying the palm of the hand to the abdomen or not. There was an absence of special sensitiveness at McBurney's point, there being just a deep-seated soreness, which seemed to be more than simply muscular or confined to the nerves of the skin. The patient was a young man, thirty-seven or thirty-eight years of age. He had had a chill and fever, but had no cough. The symptoms were those of an

ordinary catarrhal appendicitis. The temperature, on the first day that I saw him, was 101 degrees. The next day, the bronchial breathing had increased and the temperature had risen to 103.8 degrees. The proportion between the pulse and the respiration, which on the preceding day had been relatively normal,—four pulsations to one respiration,—had changed to two and a half pulsations to one respiration. There was congestion of the upper lobe of the right lung, and the abdominal symptoms had subsided. Then I knew what I had to deal with.

Dr. Boyer has not referred to the treatment, and it is really not pertinent to the subject of his paper. The discussion should not bear reference to anything except the topic of the papers, and therefore I shall say nothing about treatment. There is often too much digression to things that have nothing to do with the paper.

DR. TRAGANZA, Philadelphia: I was glad to hear Dr. Boyer speak on this subject. I have had four or five cases in my experience, in which I told the parents that the child had pneumonia but in which I came around the next day, and found the child playing on the street. I thought, of course, that I must have been mistaken in my diagnosis; but I believe now that I might have been right.

DR. C. S. RAUE, Philadelphia: I heartily agree with the sentiment of Dr. Dietz that this is one of the most excellent and up-to-date papers that I have heard for a long time on the subject of pneumonia. There are several points in it that I should like to take up. In the first place, there is the difficulty of diagnosing pneumonia in childhood. It is very much more difficult in a young child than in an adult, in whom the history is so clear cut in most cases that there is little difficulty. I know of nothing more puzzling than not merely suspecting the presence of pneumonia in a young child, but proving it. There are many reasons why this is difficult. One of these is the paucity of physical signs. Many children do not show any physical signs until they are convalescent. I have seen cases in which there was no change in the percussion note or in the auscultatory sounds until the fifth or sixth day, when a pseudo-crisis occurred. The question of the simulation of appendicitis by pneumonia is always brought up in the textbooks, but nothing is said to tell us how to differentiate them. I think that one of the most useful means of doing so is rectal examination. You can usually settle the diagnosis in that way. The blood-count, unfortunately, does not help us, except that there is a higher leukocytosis in pneumonia than in appendicitis. I pay more attention to the character of the breathing than to anything else. I am not particular about finding,

a slight dulness in one section of the lung, or a hypothetical vesicular murmur. These are things that we find after having already made our diagnosis; but if we were absolutely pinned down to them as diagnostic indications, we should hesitate in many cases to base a diagnosis upon them. One thing is sure, however; and that is a change in the respiratory rhythm. Extremely rapid respirations do not always mean pneumonia, but they seldom mean anything else. Rarely, they are toxic, in gastro-intestinal infections. In such cases, you go over the chest and do not find the physical signs. There is no cough, and not so much fever as in pneumonia. The rhythm, however, is normal in the toxic cases. The air-hunger that occurs in profound toxemia is not similar to the rapid respiration of pneumonia. In the latter, we have a grunting expiration; and at the end of inspiration, the child holds its breath, which is the reverse of normal. We usually hold our breath at the end of expiration; but in this pneumonic condition, the child inspires and then holds its breath—probably to give the blood vessels in the lungs as much chance as possible to get the oxygen from the air. These respirations are different from rapid toxic respirations, and that is an important point.

In regard to remedies, I have more faith in caffeine and coffee than in digitalis. Caffeine is one of the best stimulants to act on the vasomotor centers. In cases of extreme collapse, I use hot coffee by rectum. We should differentiate between croupous and catarrhal pneumonia. Cold air is best for catarrhal pneumonia; but I agree with Dr. Robert N. Wilson, of the Philadelphia General Hospital, that the indiscriminate use of the cold-air treatment for broncho-pneumonia is a mistake.

DR. M. M. FLEAGLE, Hanover: I should like to know whether these gentlemen have ever used spartein in these cases.

DR. D. MACFARLAN, Philadelphia: I have used spartein sulphate for cough in pneumonia. It improves the respiration and brings up the condition of the urinary apparatus. It acts much like Indian hemp.

DR. BOYER, closing: My experience with spartein is that it is not good in pneumonia, but is in dropsy, in which it increases the urinary output, in some cases, although not in others—the difference depending on the patient, and not on the drug. There is an interesting article on the "Out-door Treatment of Pneumonia," by Dr. Kerr, of Edinburgh, who states that following cases of whooping-cough, complicated with pneumonia, the death rate with the ordinary treatment was two out of three patients; whereas with intermittent out-door treatment, the death-rate was approximately one out of three.

INFANTILE PARALYSIS (POLIOMYELITIS).

BY

WILLIAM FRANCIS DOYLE, M.D., POTTSVILLE, PA.

THE study of Infantile Paralysis, classified as Poliomyelitis, has resulted, within the past few years, in establishing a number of important new facts relative to this disease.

From the experiments made by Flexner, of the Rockefeller Institute of New York, by Clark, Lucas and Osgood, by the extensive study undertaken by the Departments of Health in the different states, it has been proven that poliomyelitis is a communicable disease, coming on acutely, produced by an infectious agent or virus in the shape of a living micro-organism still unknown.

On account of the wide spread of this disease in different parts of the United States, and the epidemic nature it has taken in several of our large cities (the most prevalent occurring in Buffalo and Batavia, N. Y., in 1912), it was necessary to make further study of its epidemiology.

Since 1905, which year marked a severe outbreak in Norway and Sweden, epidemics of poliomyelitis have occurred at intervals in the United States, which led to regulations for the prevention of its spread; and our States' Departments of Health have issued orders that all cases should be reported and they advise local Boards of Health to institute quarantine measures.

Its epidemic character has been recognized only recently and made the subject of investigation,—such investigations naturally follow in institutions and hospitals where research work is carried on. Trained investigators seek to find out how one case leads to others and the factors causing its spread, what relations seasons bear and in what particular climate it thrives, whether individuality plays an important role, and the environments which favor its spread.

Most State Health Departments are endeavoring to classify the official reports and make a statistical study of them. Probably the most work in this line has been and is now being done at the Rockefeller Institute, under the direction of Simon Flexner, M.D.

Where research work is being done, endeavors are made

to isolate the micro-organism and learn its life-history to determine what factors may lead to its control.

The germ is very minute and is below the limits of direct human vision. The highest-powered microscopes have not revealed it; but, in spite of its minuteness, accurate methods exist in determining the presence of the germ by the successful transmission of poliomyelitis from humans to monkeys, and from one monkey to another.

Laboratory reports from the Department of Health of Pennsylvania, under the direction of Dr. Samuel G. Dixon, have elicited that, in blood from acute cases in humans and also in monkeys where the disease has been produced experimentally, an organism was found different from any heretofore described, which may or may not, on further investigation, prove to be the etiological factor in the causation of this disease.

I have used the term "Infantile Paralysis," because it suggests a children's disease; but poliomyelitis affects adults also, though the large majority of cases occur in the first five years of life, after which liability diminishes.

In his later works, Osler defines the disease as an acute, specific, febrile illness, affecting children and characterized anatomically by a confluent or discrete inflammation of the gray matter of the spinal cord, involving the brain, with resulting destruction of the nerve cells, and consequent degeneration of their axis cylinder processes and atrophy of muscles, and, clinically, by a rapid atropic paralysis of various skeletal muscles, usually those of the limbs but occasionally also those of the head and trunk,—a paralysis which reaches its maximum in a few hours and tends towards recovery in some parts and to the production of permanent disabilities and deformities in others.

Epidemics of poliomyelitis or infantile paralysis prevail chiefly during the warm summer months,—the greatest number of cases, according to statistics, occurring during June, July and August,—showing that it is more prevalent during hot weather. In general, hot, dry weather seems to be favorable to its spread. Fortunately our schools are closed at this period and other centres of distribution can be avoided by the careful. This disease does not entirely disappear at other seasons; but a small number of cases arise during the spring and fall months and even in winter.

The problem of contagion of the infectious agent is still

unsolved. Many claim that the germ is not known to reside anywhere in nature except in connection with human beings. Present evidence points to the fact that the germ can be carried by healthy persons who have come in contact with the sick, who will not themselves contract it but will transmit it to other healthy people. Not all cases, however, have been so connected and it remains, therefore, to ascertain whether any other agency than human contact may be invoked to account for the distribution of the infectious agent.

Theories explaining dissemination of poliomyelitis other than by direct transmission from person to person are worthy of consideration,—such as conveyance from animals to man, also by dust from barn-yards and streets,—because the greatest prevalence is among children at the age when they play in the dust and in summer, when they are out of doors more than in winter.

The probability of some insects being agents of transmission has been suggested,—those that possess the power to migrate over a considerable territory, that have access to all classes of society, that abound during the season of greatest prevalence and that do not wholly disappear at any season should be the first to receive attention. Many of the conditions are met by the common house-fly, and, in many localities, by the flea.

Thus far, we have no acceptable theory to account for the epidemic waves of this disease. In our review of literature of the past, we find this ailment prevalent in Northern Europe in an endemic type for many years; but it is only since 1907 that we have had epidemics here in the United States and in Canada, due probably to influx of immigration from Europe, causing epidemics along the Atlantic coast and in Minnesota and the Middle West, where many Scandinavian emigrants have gone. These epidemics have been large and small in closely and sparsely built communities and in districts far separated from each other, where the mode of infection has been sought in vain.

The first literature on this disease was probably that of Heine, it being described by him in 1840 as infantile spinal paralysis. He had, however, previously described it to the Society of German Naturalists and Physicians in 1838. Dr. John Badham of England had published well authenticated cases about the same time. Others who described this disease were Rilliet and Barthez, French Pediatricians; but Charcot's

description in 1870, with autopsy reports, made the subject more important.

In the summer of 1887, Medin noted the first epidemics in Stockholm. In 1905, this disease became more general and invaded a great many districts. When, in the early summer of 1907, an epidemic broke out in New York City, many of the cases being in people past the infantile period of life, Starr reports more fully,—stating that there were probably over 2,000 cases, extending along Long Island into Connecticut and up the Hudson. This epidemic began in May, 1907, and increased rapidly in June and July, reaching its height in July and August.—a few cases being reported as late as November. The mortality was about 6 to 7 per cent.

From recent literature, I could give you an adequate review of succeeding epidemics, up to the present; but it would consume too much time and would become monotonous. Medical reviews of the ephemeral sort would be tiresome reading were it not for the controversies which enliven and the criticisms that bring heated discussions. This part of the subject I will leave for you.

In the study of the etiology, modes of transmission, bacteriology and pathology of this disease, I have been confronted with so much literature and found so many points of interest which have been worked up to a fairly final stage and have given us certain facts, that it might be well to abbreviate and give only a general synopsis of these subjects.

With reference to its anatomy, this disease may be defined as an acute inflammation which affects chiefly a definite portion of the anterior grey matter of the spinal cord, yet it does not always limit itself strictly to this but generally involves the white matter in the vicinity.

In addition to the main poliomyelitis focus, there are frequently smaller inflammatory foci in other parts of the spinal cord, the medulla and even in the cortex of the brain.

In anatomical investigations of the nervous system of the spinal cord there is found a diffuse infiltrating inflammatory process closely related to the blood vessels and chiefly related to the grey matter, and mainly in the anterior horn. Generally inflammation extends along the whole length of the cord but is most intense in the cervical and lumbar enlargements. Degeneration of the ganglion cells is generally marked and extends over large areas of the cord.

Inflammation is generally more marked than the clinical symptoms elicit. Microscopic evidence tends to show that the pia mater was involved first and inflammation then extended to the cerebro spinal fluid and the cord. Inflammation reaches its greatest intensity in the anterior grey horns, because they are supplied by the most numerous and largest blood vessels.

Symptoms of meningeal irritation that are seen early in most cases tend to show that the meninges are first involved. The inflammatory process has a decided tendency toward limitation and the tissues in which it occurs have a remarkable inclination toward restitution.

The structural changes which the cells undergo from the combined effects of the infection and the interferences which it causes in their nutrition is in itself a long subject; but, suffice it to say that cells that are completely destroyed never recover and affected tissues having a specific function are never regenerated. Many of the cells in an inflamed area which, for a considerable time are functionally derelict, and completely incapacitated, recover after the inflammatory process has subsided and the lymph circulation restored, which, in turn, is seen in the rapid improvement in partially paralyzed muscles.

It is hardly necessary to state that, when a ganglion cell of the anterior horn of the spinal cord perishes, especially in the secondary changes following the inflammatory stage, when cicatricial tissue follows,—all of the intra-spinal and extra-spinal parts go with it, the anterior roots, the peripheral nerves which they go to form, and the intra-muscular distribution of these nerves within the actively contractile part of the muscle,—the entire peripheral motor neuron,—atrophy when the cell-body is destroyed by inflammatory process which forms the anatomical basis of anterior poliomyelitis.

The pathological evidence I have given you, limited almost entirely to those parts of the central nervous system freely and generously supplied with blood, with evidence of an acute inflammation affecting the most vascular part of the spinal cord, taken in conjunction with the clinical evidence of an acute febrile disorder occurring sporadically and in epidemics, and resembling in its onset and course the acute specific fevers, justifies the view that infantile paralysis is an infectious disease due to an organism which causes directly or indirectly, through its toxins, a chain of symptoms that are elicited by a clinical

study of constitutional disturbances which generally come on suddenly.

Some of the abortive cases begin with premonitory symptoms common to the milder forms of infection, such as apathy, disinclination to play, somnolency, feeling of stupidity and a desire to be left alone, followed with fever and mild symptoms of cerebro-spinal irritation, but without any motor disturbances. These symptoms pass away and the nature of the trouble remains doubtful, nor would suspicion be aroused were it not for the existence of other cases.

Again, a child who was previously perfectly well and lively is suddenly attacked by a fever, ranging from 102 to 106 degrees, and quite severe general symptoms are associated from the beginning of the fever. Some writers mention a prodromal stage, or state of incubation; but lack of definite data on the subject has prevented arriving at any definite conclusion as to the time of incubation in humans.

Sometimes the child complains of headache and sometimes of pains in loins and limbs, followed very often with cerebral symptoms, loss of consciousness, twitching or general convulsions, turning of the eyes and clonic contracture in face and extremities, often from the beginning of the disease.

Again, this illness may begin with gastro-intestinal symptoms, especially vomiting and diarrhoea. Other cases begin with coryza, bronchitis and sore throat, pointing to the fact that the disease is contracted through the buccal and nasal centres and the upper respiratory tract is the seat of invasion.

At times, the principal symptoms may be pain and tenderness in legs and spine, with occasionally rigidity of the neck.

The cases I have seen in the past ten years were generally ushered in with gastro-intestinal disturbances but in a few the predominating symptoms were convulsions and meningeal disturbances.

Only recently, I was called to attend a child only 3 years old, suffering with paralysis of both legs. I was unable to get any history from the mother, she stating that the child was well the previous night but she found it unable to walk the following morning. In this case, paralysis came on without any predisposing cause, suddenly and without warning. However, the usual history given includes some of the above named symptoms.

All the initial symptoms whose intensity varies greatly in

different cases at times last but a short while,—a day or two,—but often continue for a week.

After the initial period of this disease has passed, say in one, two or three days,—probably a week,—the mother of the little patient notices a more or less extensive paralysis, developing rapidly and in a short time, usually reaching a considerable extent, either both legs, or the legs and one arm, or the arms alone. Sometimes the muscles of the trunk of the body are affected. The paralysis seldom remains permanently as extensive as at the beginning; but diminishes and is soon found to be limited to a definite part, which remains more or less permanent.

Sometimes we have complete paralysis of one leg, sometimes paralysis of the muscles of the thigh, more rarely in the arm, chiefly in the deltoid and muscles of the lower arm and hand, sometimes in both legs. It is important in these cases to examine the muscles of the trunk along the spine, because marked scoliosis often follows from this type of paralysis.

Later on, what seems to be loss of function of an entire extremity may disappear and the paralysis restrict itself to a single muscle or group of muscles, especially those functionally associated.

In the meantime, the child's general health is improving, appetite is good, shows no sign of cerebral trouble, but the affected muscles show marked atrophy, with inability to use the affected limb, which shows itself in a month to six weeks after the paralysis.

With atropic paralysis, certain accompaniments easily recognized on examination come on more rapidly. These are loss of tendon reflex with marked degree of electrical reaction of degeneration to the faradic and galvanic currents. The degree of completeness of the degenerative reaction varies in every case.

When atrophy is great, there is usually complete absence of contraction to the faradic as well as to the galvanic currents; but, in other instances, some faradic excitability of the muscles remains, which augers well for the partial recovery of the affected part. If the atrophy has involved an entire limb, no considerable deformity may result, save that of a withered, undeveloped extremity; but the atrophy limiting itself to a group of muscles is followed by marked deformities, particularly of the feet, with different degrees and forms of club-

foot, which are caused by the unopposed contraction, the basis of muscle tonus, in antagonistic groups of muscles. Certain secondary contractures generally develop in the paralyzed parts, such as the paralytic club-foot, talipes-vero-equinus, I have mentioned.

In the arm and in the vertebral column, in paralysis of the spinal muscles, the most manifold contractures and deformities arise,—scoliosis and lardosis. Growth of the healthy side emphasizes the small size and shortening of the paralyzed members.

In comparing this disease with its pathological cause, we conclude that the involvement of the anterior horn must result in paralysis, with subsequent atrophy and reaction of degeneration, in which the reflexes must be lost but the sensibility must remain normal from the sensory conduction from the posterior grey cornua, which is seldom affected. Permanent paralysis is the result of permanent destruction which the morbid process, in itself completely ended, has caused in the spinal cord.

We are unacquainted with any method of combating the acute attack; but much can be done to prevent the spread of this disease, so we must be content to treat the initial symptoms similarly to those of other acute, infectious diseases. Recent demonstrations of the contagious nature has taught us that prophylactic measures are of the most vital importance.

Poliomyelitis has already been placed on the list of diseases that must be reported to local health authorities, and, in view of this precaution, we should adopt strict quarantine by isolating the patient as soon as possible after the appearance of the first symptoms, such as pain and tenderness of neck and spine, accompanied by headache and gastro-intestinal disturbances, with fever. Do not wait until the paralysis appears but isolate as soon as the headache or other evidences of meningeal irritation is observed!

Besides the importance to the affected individual, the recognition of acute poliomyelitis in its febrile stage has a serious bearing on the community at large. It has been shown that there are many obscure cases that never develop paralysis, whose mild symptoms indicate no specific infection, but which may carry and spread the contagion.

In general, the cases that develop no paralysis are clinically similar as regards history, proformata and onset to those that

progress to disability. Early diagnosis therefore serves a double purpose.

Isolation should be continued during the acute stages until pain, hyperesthesia and all acute symptoms subside. All children in the family should be kept out of school, no one allowed to enter the sick-room but the attendant and physician, who in turn should not mingle with others until after thorough disinfection not only of their clothing but also of the mucous membranes of the nose, throat and mouth.

Those of the family not affected should have their nasal and aural mucous membranes sprayed with some antiseptic solution. All discharges from the nose and throat of the patient should be destroyed,—the receptacles being either burned or thoroughly disinfected with carbolic acid or bichloride solution. Clothing, bedding and other material that may become infected receive the same treatment. The premises should be kept clean and as sanitary as possible. Flies and mosquitoes and all domestic animals should be excluded from the sick-room. Isolation measures, generally enforced from 4 to 6 weeks, for all members of the family, and complete fumigation with formalin by the health authorities do much to help along the prophylactic treatment.

If we have opportunity to see the case during its initial stage (before we can make a diagnosis with certainty), when there is high fever and a certain amount of stupor, a tepid bath, with an ice-cap to the head, a flushing out of the lower bowels with normal salt solution, in conjunction with the indicated remedy which may be aconite, gels., verat virid., belladonna, may abort or lessen the paralytic manifestations that follow.

Unfortunately, however, in the majority of cases, no suspicion is had of the nature of the disease unless it is prevailing epidemically, until the febrile period has passed and the paralysis shows it to be a spinal cord affection.

General treatment of the acute stage is complete rest and quiet, while diet, bathing, etc., are carried on exactly as in other infections.

After the early stages are passed, it is wise to keep our patients in bed for some little time. The most pronounced symptoms of this stage are more or less pain especially pronounced when moving the limbs with more or less hyperesthesia, which makes the child dread having anyone try to help it. This can be greatly alleviated by use of heat or a hot-water bag

to the paralyzed parts, which are generally cold and clammy. Cradles made to support the bedding will do much to overcome the discomfort of weighty bed-clothing,—wrapping the limbs in cotton or wool with sand bags to keep the limbs in normal position.

As pain and tenderness are often very great, only the most expert and gentle handling should be employed. The terror that is often manifested by these little sufferers is not due, as has been formerly suggested, to cerebral irritability, but to actual pain of inflamed nerve roots. After pain has disappeared, more active treatment directed towards the paralyzed parts is essential and the restoration of muscle function should be instituted.

The most valuable agents for this purpose are massage, warm packs or baths, electricity and exercises.

Contractures develop early in poliomyelitis and it is essential that they should be guarded against from the onset, a posterior wire splint or padded splints can be used to overcome the deformity in the limbs, and they can be readily removed, the parts inspected at stated intervals. The use of plaster paris is objectionable, for it puts the limb in a “locked-up” position and prevents any attempt to use weakened muscles at precisely the period when both active and passive motions are most to be encouraged.

Light massage is a most helpful aid, consisting of light kneading and pinching of the atrophied parts, followed by friction and percussion to influence the circulation.

By far the most valuable treatment is active and passive motion, with muscle training, which is sometimes a difficult problem to carry out, especially in infants; but, with patience and perseverance, this end can be usually accomplished.

Gymnastic training given according to the Swedish methods afford both active and passive movements,—the patient resists the movements caused by the operator and at the same time indulges in voluntary movements which the operator resists.

An important aid to prevent the progress of the atrophy is local application of heat. The patient should wear flannel under-clothing and stockings and, at night, hot-water bottles should be applied to the paralyzed extremity, which is usually cold and clammy. Hot packs should be applied to the affected parts or warm baths given which have a tonic effect.

Frequently children use their limbs unconsciously while in

the bath, the excitement of a tub-bath and the fun they have playing with their toys or floating objects make them forget their disabilities and they try new movements much more readily than in bed. The buoyancy of the water makes muscle movements less difficult. This procedure should be carefully controlled; but, if the patient can bear it well, it should last from one-half to three-quarters of an hour. Follow with brisk rubbing and gentle massage.

Electricity is used extensively after acute symptoms subside and pain is entirely gone. No matter how much you believe in electricity, do not start it very early. It will do no good and may do much harm. To be of any value, electrical treatment must be given with considerable skill and over a long period of time.

The first indication is met by the use of galvanism, the positive pole being applied over the spinal column and at a level of the inflammatory focus,—the negative pole to the soles of the feet, allowing 5 milliamperes to pass for five minutes twice a day. This procedure is used to influence the circulation of blood and lymph through the focus of disease.

When the muscles begin to show atrophy, faradic electricity is indicated, where stimulating effect is produced on the muscular fibres of the affected area and especially if there is some response to the current, when some degree of contraction is seen in the muscle or its fibres.

If there is no response to faradism when the electrodes are used over the muscles involved, it is best to continue with galvanism, as this current has more influence on nutrition. With returning muscle irritability, faradism should again be used and it can be utilized in the bath of the patient when a light current can be taken with beneficial results.

Static electricity and high frequency currents are sometimes used more for their benefit on nutrition than for their direct action on muscle contraction.

In the early period of the chronic stage of this disease, the child should have a suitable appliance or brace to conform with the degree of atrophy, and this should be worn constantly.

This is essential and should never be neglected, for, if it is, deformity and contractures are sure to occur. There can be no doubt that recovering muscles will find their task much easier if their proper relations have been maintained. Later on, the brace or splints can be taken off for a limited time during

the day, when muscle training must be taught, by inducing the child to attempt to use the weak and helpless muscles. By coaxing and inventing ingenious games which involve use of these muscles without the child realizing it, and by exercising infinite patience and tact, this can be accomplished.

At night, if the appliance is not kept on, splints should be applied, as they are lighter and less cumbersome, and will act in the same manner as the brace, while allowing the child more comfort during sleeping hours. To accomplish results, all concerned must co-operate.

Treatment of remote effects, with their accompanying deformities, calls for surgical interference and requires the co-operation of the orthopædic surgeon. Danger from delay in calling on his services makes the problem of correcting deformities more difficult and puts him at a distinct disadvantage.

It is difficult to decide when the case ceases to be a medical one and should be turned over to the surgeon, so the best plan is to have the physician and surgeon co-operate at the first signs of threatening deformities.

DISCUSSION.

DR. ANNA D. VARNER, Wilksburg: This paper is so thorough that there is very little that can be added to it; but I want to speak of my experience with this disease. Several years ago, we had three cases of infantile paralysis in as many adjoining blocks in my town. Two of these patients were mine, and one was not. On investigation, we found that these families had had no communication with one another at all. The cases all occurred within two weeks. After questioning these families thoroughly, I learned from one of them that they had had at their house for two or three weeks a dog that had dragged his hind legs. This was before the child in that family had taken sick. They had killed the dog. Investigating further, I found that there had been a street dog in that neighborhood that had also dragged his hind legs; and that he had been in all three houses, and had played with the children that were ill. Unfortunately, that dog had run away, so that I could not get either of these animals to have them investigated at the laboratory.

One child had had no prodromal symptoms to amount to anything, and the mother did not consult me with regard to the paralysis until the lapse of about two weeks, when she noticed an affection of the anterior muscles of the left foot.

This child, of course, was not isolated. The second family, when isolation was ordered, were not afraid of the disease, and so did not isolate thoroughly. I cannot tell whether one child gave the disease to another, or whether there was an intermediate animal carrier of the disease.

In the treatment, I have used, in the earlier stages, calcium phosphate, strychnine phosphate and belladonna; and later, electricity, oil rubs and building up of the patient. One of these families, believing more in osteopathy than in homeopathy, listened to the osteopath's advice and did not use a brace. Within a short time, the spinal muscles on one side were so affected as to produce a lateral curvature. They then called in an orthopedist, who put on a brace.

DR. W. G. DIETZ, Hazelton: There is one point that I do not think Dr. Doyle mentioned in his paper, or I did not hear it; and that is the possibility of the communication of anterior poliomyelitis through the nasal secretion. I think this is a valuable point. Flexner, from his experiments on monkeys, has come to the conclusion that the disease is communicable in that way. Dr. Varner spoke of the possibility that the infection might have been carried by dogs. The question is whether these animals had any catarrhal symptoms, any nasal secretion. If so, that might have been the means of communication. It is all right to say, "Here is an individual suffering with the disease, and here is another; and we presume that it was communicated from one to the other;" but what was the mode of communication, and what the chances for communication? It may have been the mucous membrane of the eyes or mouth or nose, for it is not likely that the disease was communicated simply through the air. It is probably an infection, due to a microorganism. This microorganism, however, is ultramicroscopic.

Another thing of which Dr. Doyle spoke is the great painfulness of the disease in his patients. In the cases that I have seen, painlessness has been the most remarkable characteristic. If the infection is one of the anterior horns of the spinal marrow,—and it is not conceivable that the posterior roots should be affected,—we should not have pain. The condition is simply a motor paralysis, which rapidly results in degenerative changes. If you have cutaneous hyperesthesia, it means involvement of the posterior roots; the disease is not confined to the anterior horns.

I do not think that electricity should be used until the degenerative stage has set in. While the muscles show irritability, it is not well to use even static electricity; because it is likely to increase the central irritation, instead of doing good. From

the time the muscular degeneration sets in, light massage and rubbing friction should be used. Electricity may also be employed, but only by one who is very careful and is competent to use it. I think that the use of this therapeutic agent came into disrepute largely because it was improperly employed. Its indications not being clearly understood, the results we obtain are indifferent, if we are lucky; and bad, if we are unlucky. Baths and other hygienic measures should likewise be employed.

Dr. Varner spoke of some remedies that she has employed. In the so-called asthenic cases, gelsemium is the principal remedy in the early stage. Colchicum should not be used until later.

A PLEA FOR THE SCIENTIFIC IN HOMŒOPATHY.

BY

HENRY A. WHITMARSH, M.D., F.A.C.S.

(Read Before the Meeting of the American Institute of Homeopathy, July 2, 1914.)

UNDER this title I purpose to discuss briefly and frankly some of the strong and weak points of our faith. If it be questioned whether one who is himself within can give an adequate view from without, remember that for a hundred years we have heard "what they think of us" expressed in very plain terms; and what they think of it, i. e., homœopathy, in terms still plainer, for they have come to think, in later years at least, more highly of us, even if they have not yet learned to think seriously of our therapeutic law.

I once heard Mr. Bryce charmingly explain the success of his *American Commonwealth* as due to the helpful intelligence of Americans with whom he talked. Quite another matter is it to gather intelligent criticism from those who have not ventured beyond the assumed absurdity of the small dose, hastily concluding that homœopathy must be too small even for consideration, because its dose is small. There have been, however, notable exceptions, some of whom we may take occasion to quote. For it is well to see ourselves as others see us, if only to correct erroneous impressions, and also profit meanwhile by honest criticism.

Consider first, a general statement made by a *speaker at

*Southard.

the dedication of the Evans Memorial Building in Boston two years ago, that homœopathy "has proved inadequate." From certain view points this would seem quite evident. We surely have not yet convinced the world that we are so superior that they can leave the old school treatment. The old school is still the "dominant school." It matters not how sure we are that in the actual cure of disease they are far more inadequate than we. To us likewise that ancient witticism applies, which said, that "Pluto, alarmed at the diminishing number of daily arrivals, complained to Jupiter, who slew the audacious healer (Aesculapius), on which account, some wit has said, the modern sons of Aesculapius abstain from performing prodigies."

That we have not convinced the lay world simply means, of course, that we have not convinced the scientific medical world. They still regard us as "committed to a system," narrow, and holding us, if honest, to a very limited sphere in the domain of medical science. They complain of the use of "universal affirmatives" (which by the way we do not make) and call us sectarian. Now sect is from *sequi* to follow. And we are followers of Hahnemann, but we are also followers of all the lights who have taught what is of value in our ministry to men. Too often *sect* has meant (*secare*) something cut off. And the ruthless cutting was done by the dominant school; not alone in Germany a century ago, but also in Massachusetts forty years ago. We are not now complaining; simply stating the fact.

It is inevitable that two schools, indeed any two scientific bodies, in pursuit of scientific truth, must ultimately come together. And one of the most interesting epochs in the evolution of general medicine is now at hand. The fifteen thousand homœopathic physicians of America are homœopathic from conviction, not from sentiment. We have not deceived ourselves as to the therapeutic value of minute doses. Our cures have not been the fortunate ability of nature's power to heal, but the result of an "*increased resistance*" to disease, added to nature's power, engendered in the body through the small dose of a drug selected according to the law of similars. This "*increased resistance*" is now becoming a matter of laboratory demonstration. Hahnemann was a hundred years ahead of his time on dosage. Had he been backed by the fully developed laboratory of today, there would have

been no ostracism. It was, and is, wholly logical to argue that if the *causes* of disease are microscopical, so likewise can be their cures. The porcelain filter lets pass a demonstrable influence, too fine for the microscope to detect, yet potent in the cure of disease. The world wonders at this, but does not doubt it, because modern science is able to demonstrate its reality. Hahnemann, though just as positive as to the action of his attenuations, was derided, and driven from the society of men wiser in their own conceits, and held elect by reign of law. He found the scientific medical world too slow to recognize in him more than the dupe of his own imaginings, or the dispenser of fairy tales. His experience indeed was that of reformers generally.

At present the profession recognizes chiefly two schools, undivided in each and every basic principle of medical science, and differing only in that the new has *added* a method of cure, discovered inductively, by route truly Baconian, based on the law of similars; this same law compelling its recognition as the only explanation for the discovered facts of experiment and experience. In other words the new school has simply specialized in therapeutics, abandoning nothing which was of value in the old.

With profound interest must every progressive homœopath observe the recent "sproutlings of homœopathy in the old school," as seen in radio-therapy and serum therapy, anti-toxins, and vaccines, accompanied by the giving up, by so many of the best men, of drugs used so freely in the time past.

SINGLE REMEDY.

First, the single remedy is coming more and more to the front. A prominent old school writer*, of international fame says:

"The use of tuberculin is a form of vaccination which illustrates, better than any example known to me the approval of homœopathic principles within our school. Tuberculin is of course not an antitoxin, but a toxin, and its therapeutic use is a form of vaccination. The poison of tuberculosis which can produce some of the symptoms of tuberculosis is here applied in small doses for the cure of tuberculosis through the production of immunity of resisting power in the tissues.

Surely this is a case of *similia similibus curentur*, as homœo-

*Cabot

pathic writers have pointed out. The use of bacterial vaccines in infectious diseases recently produced by A. E. Wright is distinctly homœopathic."

SIZE OF DOSE.

Second, of still greater significance, is the *smallness of the dose*, required to avoid aggravation. Tuberculin was promptly exiled for ten years because used in too large doses. Trudeau found it necessary to begin its use in febrile cases, with 1-100,000th milligram. This 1-100,000th of a milligram, when injected under the skin in a centimetre of water and absorbed into the circulation becomes diluted about 5,000,000 times by the body fluids. Hence we imagine the original milligram of tuberculin acts in a dilution of 500,000,000,000. What fixes this dose? Precisely the homœopathic principle, namely to produce a definite good effect, without any observable ill effects. "Could he (Hahnemann) have followed the progress of modern work in immunity, he might well have claimed a kinship between the principle of *similia similibus curantur* and certain principles of immunity." (Southard.)

FREQUENCY OF DOSE.

Third, the single dose, allowed to act for one week, two weeks, or a month, accords significantly with the homœopathic use of drugs especially in high potencies.

PROVINGS.

Fourth (though first in order from the scientific standpoint), the use only of those drugs in disease whose action has been tested on those in health. Priority in this is one of Hahnemann's most important claims. Without such experiment, the law of similars, though hinted at repeatedly in medical literature even from the time of Paracelsus, would never have been formulated.

Now the present age is an age of credentials. Truth, to avail, must be demonstrated. Homœopathy proves inadequate, as does everything else chiefly when subjected to unreasonable tests. Preventive medicine, *e. g.*, must always prove better than the curative. Traumatism and mechanical conditions

may always need surgical or mechanical treatment. But over and above all that is supplied by surgery and general therapeutics is a field barren without the law of similars, the loss of whose beneficent working we believe mankind would find irreparable.

We should not claim too much. Overstatement is ever harmful. Frank admission of limitations will accomplish more for the real truth. But for the wonderful impetus given to preventive medicine, and to surgery, by the discovery of the germ theory of disease, homœopathy would doubtless have impressed itself more widely still. As a school we have made some mistakes. We have had our full share of "knaves, fools, and fanatics." Dosage should never have been sufficient cause for dissension in the ranks, because no principle was at stake. Individuals in the school have made greater mistakes.

What folly to say, "I have no use for diagnosis;" that "pathology has no place in a homœopathic meeting." And what greater folly to decry surgery, whose improved methods are mainly responsible for most of the increased relief of pain and saving of life during the past twenty-five years. Bacon said, "I hold every man a debtor to his profession." No man liveth to himself and no school of men lives to itself. We can ill afford to be indifferent to any bit of truth in the whole field of medicine. Our duty is not alone to our immediate patients. Our ministry is to the race. Meanwhile our attitude to the profession at large must be tolerant, consistent and sympathetic. We are only a part of medicine; regular, general, all round physicians, plus a little more. I would insist that every homœopathic medical college teach its students old school *materia medica* as well, for breadth of view, and an ability to meet their old school brethren on even terms. But special strength should lie in the teaching of homœopathic *materia medica*, as the chief *raison d'être* for our distinctive colleges. And this teaching should be *clinical teaching*, revealing the *limitations* as well as the *strength of homœopathic prescribing*.

In conclusion, what kind of propagandism should we most emphasize? Let us indulge no more in self-adulation. "No man ever pushed himself forward by patting himself on the back." Publicity will be necessary if we at all measure up to our moral obligations. But let it be conscientious records of the results of observation and experience; especially those of the up-to-date hospitals where system and accuracy are visible

in the reports. We can perhaps properly preach to the laity, but the teachers of the laity are medical men as a whole, and we would better strive to bring to the teachers the profession at large, the scientific reasonableness of the law of similars, especially as now being substantiated by recent progress in curative methods.

The few drugs of the old school, obviously and promptly curative of disease, we recognize as homœopathic. Vaccination by Jenner, distinctively homœopathic, was co-incident with the formulation of the law of similars.

Antitoxins and vaccines, also apparently homœopathic, form almost the only great advance in general therapeutics for fifty years.

So far as we are aware there has been formulated but one scientific law of cure. Whatever the limitations of its application, it remains unshaken after all the years, indeed finds new confirmation now in laboratories, outside and inside, both schools of medicine. The opsonic index as influenced by homœopathic drugs in small doses, studied by Watters, Wheeler, Burrett, and others, should receive further study, as affording the kind of proof needed by men skeptical, and men, too, properly conservative, in their estimate of the value of drugs for the cure of disease.

Finally, may we not forget that everywhere lovers of truth will be bound to no school except as it shall seek and promulgate the truth wherever found and whithersoever it may lead. Your part and mine shall be, not only to seek for ourselves, but also to share with others, the fullest possible measure of the truth in medicine. We are not responsible for our inheritance; we are responsible for the use we make of it, and for what we leave succeeding generations.

CASE OF NICOTINE POISONING.—R. Moll Campius. (*La Medicina de Los Niños*, January, 1914, p. 25.) A boy twelve years old suddenly developed an abnormal taste for tobacco. He was soon smoking from ten to twenty cigars daily. Health began to suffer shortly, appetite disappeared, the boy became cross, disobedient and dazed. Reflexes diminished, sight was impaired, all movements became difficult. Tobacco was forbidden; rest, warm baths and massage soon removed all the symptoms of intoxication.—*Archives of Pediatrics*.

EDITORIAL

A SUCCESSFUL MEDICAL MEETING.

THE meeting of the Homœopathic Medical Society of the State of Pennsylvania recently held at Galen Hall, Wernersville, was, from a social and scientific standpoint, one of the most successful in the history of the Society. That the papers presented were far above the average was the opinion of everyone in attendance at the meetings. The attendance at the scientific sessions was unusually good, and fully demonstrated the wisdom of holding meetings in localities where there are few interests outside of the hotel to attract members. The banquet, the minstrel show, the dance and other social gatherings were entered into heartily and were sources of a great deal of pleasure to all members in attendance.

The Society is under great obligation to the management of Galen Hall, for the provisions made for their entertainment and for the excellent service furnished the visiting members. Mr. Spencer, by his cordial hospitality and by his effusive displays of oratory added much to the enjoyment of the meeting. In fact the entire corps of the sanitarium spared no pains to add to the comfort and pleasure of the members of the Society.

That we may meet again at Galen Hall in the near future is the wish of a large proportion of the members of the Society.

G. H. W.

SYPHILIS OF THE INTERNAL ORGANS.

OWING to the fact that the most readily observed manifestations of syphilis occur on the skin and mucous membranes of the body, it is not unnatural that the deeper seated and less obvious features of the disease should often pass unnoticed.

Since the discovery of the Wassermann test, renewed inter-

est has been taken in this subject with the result that many important pathological changes in internal organs have been shown to have a syphilitic basis.

Visceral lesions may occur at any time after the disease has become general. In the earlier stages of the disease these lesions are of the acute inflammatory type and simulate in many respects inflammatory processes of non-luetic origin. This acute inflammation is frequently accompanied by fever and is of comparatively short duration, the tendency being toward recovery.

Later we have the development of internal lesions of a more serious and lasting character which are of the nature of chronic inflammatory processes leading to degeneration of the cell elements with subsequent fibrosis, or to gummatous infiltration and cell destruction. The vascular system usually suffers most severely as the result of a syphilitic infection. Inflammation of the lining of the blood vessels, endarteritis, with various forms of vascular degeneration and obliteration, being part of the usual changes brought about by syphilis. The aorta and the coronary arteries are especially likely to be involved, with resulting aneurism, myocardial degeneration and anginal attacks. Syphilitic aortitis is now commonly recognized to be the cause of the vast majority of cases of aneurism of the aorta and a very prominent factor in serious forms of myocardial degeneration. Gummatous lesions of the large vessels and of the heart also occur, and some cases of heart block can be traced to this origin.

Next to the vascular system, the nervous system suffers most severely as the result of irritation by the syphilitic virus.

It is stated on the authority of competent neurologists that at least ten per cent. of all organic nervous diseases are due to syphilis. It is probable that the discoveries of the last two or three years have considerably broadened the scope of syphilis as an etiological factor in nervous affections and it has been definitely proven that in addition to the cephalalgia, the cranial nerve affections, the paralyses and epileptiform seizures formerly attributed to syphilis, that general paralysis and tabes are also the result of the action of the syphilitic virus on the nervous system.

Nephritis, both acute and chronic, is a less common manifestations of the disease. It is probable that the liver is affected much more frequently than is generally recognized.

Before the discovery of the Wassermann test the most we could do was to suspect the syphilitic origin of many obscure internal processes. Today, however, we are able to confirm this in the vast majority of instances by the Wassermann test and the progressive physician should not fail to have this test made if there is a possibility of syphilis being the etiologic factor.

G. H. W.

EXAMINATION OF THE CHEST IN CHILDREN.—In a paper on "Examination of the Chest in Children," by Richard M. Smith, M. D., of Boston, and Clifford D. Sweet, M. D., of Fresno, California reported in the *American Journal of Diseases of Children* September, 1914, the importance of the examination of the chest in children was brought out. In addition to the customary physical examination a Roentgenogram was made of the chest, also the von Pirquet skin reaction. The results in 100 cases were tabulated. The main interest in the study was, of course, the presence or absence of tuberculosis. But other important conditions were also brought out. After the presence of tuberculous infection has been determined, it is necessary to decide whether or not that infection is active. Other organisms may also be found which require active treatment. The morning and evening temperature should be secured if possible, the weights taken and compared with the average weight of children of the same age. Only ten cases had night sweats, and none of these were the cases with active tuberculosis. All the cases had cough. Thirty-four of the cases gave a history of no exposure to tuberculosis. All but six of these 34 had a positive von Pirquet reaction.

The conclusions were that only nine out of the 100 suspected cases had active tuberculosis; that 63 had evidences of tuberculous infection, now in a quiescent state, and that 39 had no evidence of tuberculosis of any kind. It is important to find the cases of active tuberculosis and give them the proper care. It is equally important that this diagnosis is correct. Patients with old inactive scars of tuberculous infection should not be treated as cases of active tuberculosis. A considerable number of children suspected of having tuberculosis will be proved to have an infection with some other organism than the tuberculous bacillus. These patients need proper treatment. A part of this treatment consists in keeping them away from exposure to tuberculosis either outside or in a tuberculosis sanitarium. These patients deserve and should receive the most careful consideration.

MILIARY TUBERCULOSIS.—H. Dufour and T. Thiers in (*Ann. de Med. Inf.*, July 1, 1913), report the case of a young woman who died of acute tuberculous meningitis during pregnancy. At the autopsy a fetus was found with the abdomen dilated by ascitic fluid. The placenta, macroscopically, was healthy. The ascitic fluid injected in the peritoneal cavity of guinea pigs showed in one case a tubercular infection with granules and Koch bacilli. The placenta did not reveal lesions even under the microscope.

GLEANINGS

THE ACTION OF DRUGS IN HEART FAILURE.—In the *Australian Medical Journal* of April 18, 1914, Turnbull says that of recent years much work has been done, both experimentally and clinically, in the effort to determine by precise methods the action of drugs upon the heart. It is perhaps not too much to say that the only drugs in general use which have a definite and demonstrable effect on the heart are those of the digitalis group. The supposed effects of strychnine, camphor, and the like cannot be actually demonstrated, and remain still a pious belief of the clinician, though efforts are constantly being made to show some definite action. Mackenzie has pointed out that it is rare for a tincture of digitalis, procured in the ordinary way from a reputable druggist, to be inert, but that the reaction of the heart to the drug varies with the nature of the lesion, and his own and other observers' work has established this latter fact thoroughly, and has provided us with some definite knowledge to aid us in using the drug. It is here perhaps that the polygraph will usually prove amply sufficient as a guide to the results of digitalis in treatment. The best results from digitalis treatment are, of course, got in cases of auricular fibrillation, especially where the lesion is an old, rheumatic one, but at times, in cases of this form of arrhythmia, remarkably good results may be obtained even in the hearts of old people, and in those in whom the lesion is due to a toxin—*e. g.*, exophthalmic goitre.

In spite of such careful work by many observers, the probable results of digitalis administration in cases in which the rhythm is normal are very difficult to forecast, but there is undoubtedly a definite action on heart muscle as well as a powerful vagal stimulation, as is shown by the inability of atropine to remove all the results of digitalis. Until our knowledge is much more precise, the wisest course to pursue is to use digitalis in all cases of heart failure with dilatation and dropsy, no matter what is the state of the heart, provided rest and good general treatment fail to allow of the recovery of the organ. In any case in which it is definitely considered that digitalis is indicated, and should react favorably, it is essential that the drug be pushed until the symptoms of poisoning—*e. g.*, headache, nausea, giddiness, etc.—are produced, before it is discarded as useless. It is not uncommon to see cases of auricular fibrillation which have failed to react to a dose of tincture of digitalis, 10 minims, t.i.d., continued for some weeks, react promptly and satisfactorily to twice the dose. Of course, if a perfect result is obtained earlier, there is no need to push the drug till unpleasant symptoms are procured, but often the symptoms are noted before any cardiac effect has become obvious. The drug is then stopped for a while, and the pulse is frequently found to be slowing satisfactorily and

the symptoms of heart failure disappearing, the improvement having apparently set in almost immediately after the onset of the symptoms of full drug dosage. As soon as the symptoms of full dosage appear, the drug should be withheld for a day or two, and then given again in smaller doses, just sufficient being used to retain the good effects.

It is doubtful whether any absolute contraindication to digitalis exists, since in some cases in which it produces undesirable symptoms or signs its omission is accompanied by progressive heart failure, but certain signs are danger signals and indicate that the drug must be stopped if possible, or at least used with very special care. The chief of these are:

(a) Partial heart-block or increased a-c interval, due to an incomplete lesion of the a-v bundle. In these cases digitalis, partly by a direct muscular action, and very largely by its action on the vagus, increases the difficulty of conduction, and may increase the block or cause a previously lengthened conduction period to increase, till some impulses are blocked. Frequently where there is heart failure, the patient may feel much relieved while under digitalis, in spite of the increased difficulty of conduction, and the drug may need to be continued, though at times a combination with atropine is successful in abolishing the vagal effect.

(b) Pulsus alternans. In cases in which this condition is present, digitalis should be used very cautiously, and only where the patient is under careful observation. It often happens that the patient feels distinctly improved for a day or two and then complains of a feeling of exhaustion, which increases while the drug is continued. This is a symptom of great gravity, and if not attended to fatal results may ensue.

(c) Extrasystoles have been said to be banished by digitalis, but the much more common experience is that their numbers are increased by the drug, and its administration may certainly be followed by their appearance in cases in which they were previously absent. In cases of auricular fibrillation the well-known coupled rhythm produced by digitalis is due to the incidence of a centricular extrasystole following each response to supra-ventricular stimuli, and in these cases the appearance of the premature beats must be regarded as a danger-signal, as several sudden and unexpected deaths have occurred in such cases, probably from ventricular fibrillation. At times the symptoms of heart failure become marked again immediately the drug is stopped, but here the physician must use his own judgment in each individual case, or decide which of two evils is the greater, but it is extremely important that he should at once recognize the coupled beat and appreciate its significance and dangers.

High blood-pressure was at one time considered to be a contraindication to digitalis, but much evidence has accumulated in opposition to this view, and there is no doubt that cases with very high blood-pressure are frequently greatly benefited by the drug. In many cases at least the blood-pressure rises as the heart fails, and if the heart is slowed and strengthened the circulatory balance is readjusted and the blood-pressure falls again. The administration of digitalis will only very rarely be found to cause an appreciable rise of blood-pressure in clinical cases.

Myocardial degeneration is certainly no contraindication to the use of digitalis, which often is of great value in cases in which the heart muscle is much degenerated. The value or otherwise of digitalis to a heart la-

boring in the grip of a toxin is still uncertain, and much work requires to be done to settle this point. However, we know it may be of great value at times in exophthalmic goitre and pneumonia, and at times also in acute rheumatism, and there is no doubt that it should be thoroughly tried where the heart is progressively failing in spite of treatment in any acute disease.

The other drugs of the digitalis group act similarly, but less strongly and certainly than digitalis, and no advantage seems to be got by their substitution for it.

Though strophanthus and squills seem less liable to irritate the stomach, they are apparently more irritant to the intestine. Strophanthus is less readily absorbed from the intestine than digitalis, and this irregularity and difficulty of absorption make it more difficult to handle effectively, and usually much larger doses are required, while squills is irregular in absorption, weak in action when administered by the mouth in man, and is very rarely required where digitalis can be used.—*Therapeutic Gazette*.

ADRENALIN IN THE TREATMENT OF ACCIDENTS DUE TO SALVARSAN INJECTIONS.—In a recent issue of the *British Medical Journal* (May 9, p. 1044) was printed a letter from Professor Ehrlich, in which he set forth his views about the way in which death may occur after salvarsan injections. In that letter he refers in terms of warm approbation to the use of adrenalin advocated by Milian, and expresses the hope that by a vigorous adrenalin treatment it will be possible to prevent these occasional dangerous manifestations in salvarsan therapy, or, at any rate, in a very large percentage of the cases to treat them satisfactorily when they do occur.

Milian holds that salvarsan is the least toxic of all known arsenical compounds, and, indeed, denies that it has any toxic character at all; even after fatal doses of it have been administered no toxic lesions can be found in the human body. No cellular lesions have yet been demonstrated in the nervous system or other organs of men or animals killed by overdoses of salvarsan. Milian maintains that it is quite otherwise with atoxyl, for example, which he considers a highly poisonous compound of arsenic; he lays great emphasis on the fact that no true case of deafness or blindness due to the action of salvarsan has yet been published, the lesion, when it does occur, being really due to the syphilis and not to the salvarsan. To illustrate this point he quotes the case of a patient who received four injections of salvarsan (0.45, 0.60, 0.75, and 0.90 gramme), and six weeks after the last of them developed blindness of the left eye with acute optic neuritis. Believing that this neuritis was due to the syphilis and not to the salvarsan treatment, he at once gave the patient three further injections of salvarsan (0.60, 0.75, and 0.90 gramme) with the result that the neuritis subsided and the sight returned within twenty days.

Milian argues that salvarsan is a nocuous but not a toxic drug, and that its harmfulness resides in its very powerful action as a vasodilator. Comparing its action to that of amyl nitrite, he ascribes the catastrophes that occasionally follow its use to what he calls a *crise nitritoïde*, the effects of an acute vasodilatation, whether in the central nervous system or elsewhere. He states that salvarsan may be or has been administered in three forms: (1) The original acid salt, the dihydrochloride of dioxydiamidoarsenobenzol, which is a very violent vasodilator, and must be injected

both slowly and in a highly dilute state if accidents are to be avoided; (2) the alkaline sodium salt, a much less powerful vasodilator, and (3) the neutral product neosalvarsan. He estimates roughly that some unpleasant result, some sort of a *crise nitritide*, is produced in perhaps 80 per cent. of the cases in which (1) is injected, in 10 per cent. with (2) and in only 5 per cent. with (3). Some patients are very sensitive to salvarsan injections, as he remarks, and he calls them "ectasophils"; he gives a long list of the unpleasant symptoms that may result from injections of salvarsan, all of them due, he holds, to vasodilatation, and therefore all of them to be combated with adrenalin. Among these are the following: flushing and congestion of the face, swelling of the lips and ears, lacrimation, headache, syncope, irregular fever, urticaria, anorexia, vomiting, diarrhoea, colic, rigors, sweating; and, when the acute attack is over, fatigue, exhaustion, pains all over.

The treatment and the prophylaxis for all these troubles recommended by Milian are quite simple. If there is any reason to suppose that the patient is going to take the salvarsan badly, he should receive, fifteen minutes before the salvarsan is given, a preliminary subcutaneous injection of $\frac{1}{2}$ mg. of adrenalin and an intramuscular injection of $1\frac{1}{2}$ mg. If unpleasant symptoms arise after the salvarsan injection, they can be cut short in a few minutes by the subcutaneous injection of the same dose of adrenalin. It is important that adrenalin of a trustworthy brand should be employed, and that it should be given and repeated from time to time as long as may prove necessary. No harm results from such use of adrenalin; the patient may become pale after its injection (Milian calls this a "leuco-reaction"), but the pallor is not associated with any discomfort, although the patient may exhibit a transient characteristic coarse "adrenal tremor" of the hands. He administers the larger part of the dose by intramuscular injection in order to delay the absorption and elimination of the drug as long as possible.

These intramuscular injections often prove painful for a day or two, and so the salvarsan may be combined with $\frac{1}{2}$ or 1 cg. of stovaine. Alternately "ectasophil" patients may be given adrenalin by the mouth, in the form of two pills containing each $\frac{1}{4}$ mg. of dry adrenalin, three times a day for three or four days after the administration of salvarsan. Milian also states that if a patient complains of a taste of ether, salt, or garlic, while the salvarsan is being injected, this is an indication that he is likely to be an "ectasophil" and to require treatment with adrenalin.—*Therapeutic Gazette*.

INDIGESTION, A FORERUNNER OF DISEASES OF THE CARDIOVASCULAR AND RENAL SYSTEMS.—In the past few years all medical directors and insurance men have been very much interested in disease of the cardiovascular and renal systems and their terminal results, especially apoplexy, myocardial degeneration, coronary sclerosis, and uremia following chronic nephritis. In spite of the care in selecting risks our mortality from the above diseases seems to be increasing. Dr. Fred M. Hodges, assistant medical director Atlantic Life Insurance Company, Richmond, Va., says that he has for the last three or four years been very much interested in a certain class of cases that may be overlooked at the time of examination, although

a few years later many of the ordinary methods of examination would exclude them from insurance. During this time in a personal examination of 2,000 cases he has noted about thirty cases which would seem to him to come under this class. Cases having no symptoms or history of syphilis, alcoholism, or organic disease of stomach, appendix, or gall-bladder, etc., were selected. These persons seem to complain of slight indigestion, some discomfort after meals, and constipation before any cardiovascular or renal changes are noted. The cases may be divided into two groups. In Group I are those giving a history of constipation, indigestion, etc., followed by cardiovascular and renal changes with elevated blood pressure. In Group II those with a history of constipation and indigestion followed by low blood pressure, marked indicanuria, and neurasthenic symptoms with very few or no cardiovascular or renal changes.

In order to show the development of cases in Group I this group has been divided into three stages, as follows: (1) Those where there was only a complaint of indigestion and constipation; (2) those where there was this complaint and where complete urinalysis and the sphygmomanometer would exclude them from standard insurance; (3) cases showing very little previous history except indigestion and constipation with well-marked cardiovascular and renal changes. From his study of these cases Hodges draws the following conclusions: (1) Indigestion and constipation may in a small percentage of cases be the only impairment and forerunner of disease of the cardiovascular and renal systems, and this is of especial significance where there is family history of cardiovascular disease. (2) Home office urinalysis and the sphygmomanometer are usually the first methods of examination to exclude the cases later showing cardiovascular and renal changes. (3) Routine examinations for indican should be made in all cases of chronic constipation and indigestion and especially those showing low blood pressure readings. (4) Applicants about forty years of age or over, with heavy responsibilities and twenty per cent. or more over maximum weight, make up the majority of the cases of the first group. (5) Whatever may be determined to be the actual cause of indicanuria, from these cases it does not seem to be a prominent factor as a forerunner of cardiovascular and renal disease, but is found in a certain percentage of cases in association with low blood pressure. (6) This subject presents a very interesting and important field for further study, and we should direct our attention to scientific research in this direction.—*Proceedings of the Fourth Mid-Year Meeting of the Medical Section of the American Life Convention. Charlotte Medical Journal.*

GALL-STONES AND GASTRIC JUICE.—Aldor (*Wien. Klin. Wochenschr.*) says that cholelithiasis may occur with hyperacidity, subacidity or normal gastric acidity. Its non-surgical treatment should depend primarily upon the gastric findings. The gall-bladder is not a mere reservoir but exerts reflexly a definite influence upon gastric secretion. Thus it has been found that extirpation of the gall-bladder is followed by permanent gastric subacidity or anacidity. Accordingly, the gastric subacidity that is so frequent an accompaniment of cholelithiasis may be due to either of two causes, a reflex from the gall-bladder or a chronic gastritis. The latter condition is characterized by the presence of much mucus in the gastric

contents and by a progressive fall in the amount of hydrochloric acid present. Such patients usually do not have extremely violent attacks of colic, but, on account of their gastritis, are never entirely free from pain. Dietetic indiscretions usually lead to a paroxysm. The other group of cases is usually due to a coli infection of the gall-bladder without gastric involvement. The attacks of colic are here very severe but with symptom-free intervals. Mucous colitis with constipation, diarrhœa, meteorism, etc., are common. Therapeutically both groups of cases demand a diet consisting of milk, eggs and vegetables. Hydrochloric acid may be given by mouth and large quantities of water per rectum. Gastric lavage is indicated only in the cases complicated by gastric catarrh.—*Charlotte Medical Journal*.

MEDICAL CERTIFICATES.—Collie states that medical certificates in legal cases should always be given with great caution. What should one do when asked to examine an injured person by both employer and employe, or by two parties to a suit in an action at common law? There is a general impression that, having given a certificate to one side, it is disloyal—indeed, dishonorable—to fish, as it were, on both sides of the stream, and furnish a report to what the lawyers call the “other side.” This attitude assumes a very low standard. If one has given a certificate for a plaintiff which exaggerates his injuries, or if acting for the defendant, one has given a certificate minimizing what exists, obviously it would be impossible to report on the case to the opposite party to a suit. Medical men are not partisans in law suits; unlike the attorney, they have no “other side” to consider. Solicitors and barristers are paid to make the best case they can for their client. The doctor certifies facts as found, or should do so. There is, therefore, no reason whatever why a certificate should not be furnished to both parties and a fee charged to each. Of two things, however, one must be scrupulously careful. First, the facts must be presented in exactly the same way in both instances. Indeed, the safest plan is to make the second report a copy of the first. Secondly, both parties should be acquainted with the fact that such a duplicate has been issued. Loyalty demands this. It is always advisable to retain an exact copy of all letters and reports on medico-legal cases.—*British Medical Journal*.

THE ROENTGEN RAY IN DUODENAL DIAGNOSIS.—Skinner (*Interstate Medical Journal*, February, 1914) in a collective abstract on this subject quotes Carman to the effect that the Roentgen evidence of duodenal ulcer is as follows:

Early free opening of the pylorus, with early clearance of the stomach; lagging of bismuth in the duodenum; residue in the stomach (sometimes in the duodenum) after six hours, if there is an obstruction from scar contraction; pressure-tender point over the duodenum; dilatation of the cap; irregular outline of the cap or duodenum; diverticulum of perforating ulcer; vigorous peristalsis, especially if there is obstruction.

Carman incorporates the following reservations in his article: “Radiological diagnosis of duodenal ulcer, unless corroborated by clinical data, is in most instances a mere guess. Excluding obstructive cases, the Roentgen-ray appearance of duodenal ulcer is often seen when the actual lesion is elsewhere, as in the appendix or gall-bladder.

The Roentgen-ray findings, unless extraordinarily marked and decisive, should be correlated with the anamnesis, the laboratory reports, the clinical data, and always with common sense.

Barclay has confessed to an inability definitely to determine a symptom-complex which he terms duodenal irritation:

The stomach always exhibits good tone, even if ptosis is present. Hypertonus is often noted.

The peristalsis is more active than normal, especially when the food has commenced to pass through the duodenum.

The food begins to leave the stomach almost at once, and as a rule continues to pass out very rapidly until the stomach is empty.

The pyloric relaxation is so complete that large masses of food are seen passing through the duodenum instead of the fine, almost imperceptible stream that can only be detected with certainty by means of an instantaneous radiogram. In certain cases a separate bolus is seen remaining, apparently in a pocket, in the duodenum.

The value of this symptom-complex is considerable when we realize that operative analysis of Barclay's 39 reported cases resulted as follows: Duodenal ulceration, 14 cases; cicatrization of the duodenum, 7 cases; adhesions about duodenum (generally in connection with gall-bladder), 13 cases; carcinoma of this region, 3 cases; appendicitis, abscess, 1 case; appendix fixed by adhesions near duodenum 1 case.

He says the two signs usually emphasized are (1) abnormally marked peristalsis, and (2) hypermotility. The first is due to the muscular hypertrophy following pyloric spasm, but no diagnosis of duodenal ulcer should be made on the presence of marked peristalsis alone, as abnormal nervous influence may produce this as well as pyloric stenosis due to other cause than cicatricial ulcer. Exaggerated peristalsis may be absent in many cases which prove at operation to be duodenal ulcer, and he regards this sign as merely suggestive.

The effect of adhesions produced during the healing of an old duodenal ulcer cannot always be differentiated from the actual defect due to the ulcer itself, or from the crater of the cicatrix. In all these conditions, however, although we may have the same smoothly-rounded or irregular defect, we can tell that the duodenum is not normal, but that it is definitely pathological. In questions of fixation of the duodenum by periduodenitis, the fluoroscope does play an important part. By its use we can tell whether or not an apparently right-sided position of the stomach is due to accident, or to actual fixation of the duodenum to the region of the gall-bladder, or the colon. It is only, however, by following out the above-mentioned technique, with serial Roentgen plates, that we can determine whether these adhesions are due to an old healed ulcer of the duodenum or to gall-bladder disease.

"A 'normal' bismuth mass in the duodenum means of course, that there are no cicatricial contractions, no adhesions, perforations, sacculations, etc. The only thing that could possibly be present is a simple peptic erosion of the mucous membrane not involving the muscularis. This condition, while quite common in simple gastric ulcer, is practically unknown with duodenal ulcer. The latter very soon becomes callous, and will then show its effect upon the bismuth mass.' At any rate, a case that is manifesting

itself by any clinical symptoms is sure to be more than a simple erosion." Moynihan, in his monograph on duodenal ulcer, says: "A duodenal ulcer, which has been the cause of protracted and recurrent symptoms, is always visible from the outside of the intestine, is always palpable, and therefore is always demonstrable. To this statement there are no exceptions. If this be true, an ulcer which can be seen from the outside and can be palpated at operation is sure to disturb the outlines of the contained bismuth mass. We can therefore safely neglect the possibility of simple mucous membrane erosion, and flatly state that a duodenum which can be demonstrated as anatomically normal by our method does not contain an ulcer, at least an ulcer which calls for surgical interference."—*Therapeutic Gazette*.

ISOLATION AND QUARANTINE PERIODS IN THE MORE COMMON INFECTIOUS DISEASES.—Claude B. Ker (in the *Edinburgh Medical Journal*, January, 1914) in discussing this subject has the following to say regarding scarlet fever, diphtheria, measles, rubella, whooping-cough, chicken-pox and mumps:

Scarlet Fever.—The normal minimum isolation recommended for this disease is six weeks—a period which may be either much too short or unnecessarily long according to the condition of the individual case. The question of detention resolves itself into the question—Is desquamation infectious? a fact by no means proven. Priestley discharged from the hospital 120 desquamating children without causing a single secondary case. Others have adopted four instead of six weeks as the minimum period of detention in the hospital without increasing the return case rate. Ker believes that the adoption of five instead of six weeks as the minimum period of isolation would be a great step in advance. He considers seven days an ample period of quarantine for contacts.

Diphtheria.—Patients should be isolated until the necessary negative cultures have been obtained. Quarantine is unnecessary for perfectly well contacts who have given two successive negative cultures within three or four days.

Measles.—The usual isolation period for measles is two weeks from the appearance of the rash. In hospital outbreaks, however, measles patients are regarded as free from infection as soon as the rash has disappeared. The quarantine period of measles in hospital outbreaks is fifteen days; eight days may be regarded as a minimum, and nine or ten days more frequently from the probable moment of infection to the occurrence of the first symptom, and from thirteen to fifteen days to the appearance of the rash. Eberstaller at Graz allows contacts to attend school for eight days and closes the infected class from the ninth to the fourteenth day.

Rubella.—The period of detention for rubella is ten days. Netter and several other French authors, however, hold that a case is no longer infectious after the disappearance of the eruption. The incubation period is from twelve to twenty days. Contacts may safely attend school for eight or nine days after exposure and thereafter should be excluded until the twenty-first day is past.

Whooping-cough.—Ker has the gravest doubts as to the infectivity of whooping-cough when the paroxysmal stage has fully developed, and con-

siders that, in favorable circumstances and with otherwise healthy children, isolation is unnecessary after the paroxysmal stage has lasted for a week or ten days.

Chicken-pox.—Ker believes a patient to be infectious until the last crust has separated. As regards quarantine, contacts are allowed to mix with other children up to the eleventh day, when they are isolated until the twenty-second. School attendance can safely be allowed for ten days from the first exposure, and be resumed after three weeks from the last contact with the patient.

Mumps.—The usual isolation period for mumps is three weeks, but Ker has never seen harm result from allowing patients out of isolation when a full week has elapsed after the disappearance of swelling. Exclusion of contacts from the thirteenth to the twenty-sixth day from date of the first and last exposure respectively would be a safe rule for schools to adopt.

EXPERIMENTS WITH ROSENBACH'S TUBERCULIN IN INTERNAL TUBERCULOSIS OF CHILDREN.—Albert Stommel (*Arch. f. Kinderheil.*, Bd. 62, H.V.-VI.) gives his results in the treatment of twenty-two cases of internal tuberculosis, in children; eighteen of lungs and bronchial glands and four of abdominal tuberculosis. This tuberculin is made from a six to eight weeks' old culture of tubercle bacilli grown with trichophyton culture, and thus attenuated so that it is far less poisonous than old tuberculin of Koch. The results are tabulated and histories of cases given in full. Out of the eighteen pulmonary or bronchial gland cases there was marked improvement in six cases, slight in four cases, while five showed no change, and three became worse clinically, two dying. In one case there was a disappearance of lung signs, but these were only slight on entrance. All the others remained unchanged or slightly changed, and the von Pirquet reaction was present after as well as before the treatment. There was no effect on the fever. The improvement in general health was only such as would be expected in the more hygienic surroundings of the hospital. Increase in weight was not marked. The author concludes that in his cases the effect of the Rosenberg tuberculin was not such as to encourage its use as a curative measure in tuberculosis in children. In some cases the effect of the treatment was unfavorable.—*Amer. Jour. of Obstetrics.*

THE USE OF BOILED MILK IN INFANT FEEDING.—Dr. R. H. Dennett, of New York, in this paper said that it was frequently necessary to boil infants' food. In no single instance had he seen digestive disturbance follow from use of boiled milk. In changing from boiled milk to raw milk the stools frequently had curds and children frequently had indigestion. The prolonged use of boiled milk did not necessarily cause rickets, anemia, or malnutrition, but it might cause constipation. With the use of orange juice boiled milk did not cause scurvy.—*Medical Record.*

A CASE OF PANOPHTHALMITIS CAUSED BY *BACILLUS SUBTILIS* FOLLOWING A CATARACT EXTRACTION.—The author reviews the literature on organisms which have been found in cases of panophthalmitis and reports a case

in which an Arab woman had her cataract extracted by Dr. W. E. Cant at the British Ophthalmic Hospital, Jerusalem. The operation was followed by panophthalmitis. Some years after, Dr. Butler tried to extract the second time after preliminary iridectomy. It became dislocated into the vitreous and he failed to extract with the vectis. Three days later, although he had adopted every aseptic precaution known to him, panophthalmitis set in.

A second case was a male laborer, age sixty-five years, who had contracted syphilis when a young man. There was an anterior choroiditis almost certainly syphilitic in nature, white patches of atrophy and small floating opacities in the vitreous. On admission to the hospital a culture was made and a copious growth of staphylococcus albus grew. The eyes were treated until the sac became sterile and a preliminary iridectomy was done. This was followed by no reaction. About fourteen weeks later the lens was extracted without complications. The only instruments introduced into the eye were the knife, cystatome and repositor, all of which had been boiled. Two days later the eye was inflamed and rather painful, much chemosis, some lymph on wound, but no pus. Nothing grew on a culture taken at this time. Two weeks later the eye was excised for panophthalmitis. When it was dissected it was seen there was a collection of pus in the vitreous and a tract of pus led from the wound to the vitreous. Tubes of blood serum and agar were inoculated from the pus and three organisms were separated: (1) A copious growth of staphylococcus albus, (2) a few gram-positive rods with morphologic characteristics of bacillus subtilis, (3) a small gram-negative bacillus.

After describing in detail his method of sterilization of instruments and the preparation of the eye, he concludes "that the panophthalmitis was caused by an infection with the spores of subtilis, probably introduced by the knife. It was likely that the secondary infection with staphylococcus and bacteria coli (the gram-negative rods) had some connection with the subconjunctival flora, although we failed to grow them from the cul-de-sac."—*Dr. H. Gifford, in the Ophthalmoscope.*

WM. SPENCER, M. D.

A CASE OF BILATERAL ANNULAR TRACOMATOUS PANNUS.—The author reports a case from the Traveling Ophthalmic Hospital of Egypt, which bore a remarkably close resemblance to vernal catarrh, but which proved to be trachoma. The patient was a six-year-old male with a negative history except that both parents were trachomatous, the mother in stage two and the father in stage three. On each side of the cornea, about midway between the limbus and canthus was a crescentic aggregation of infiltration, the concave margin being towards the limbus. The areas were oedematous, pinkish, gelatinous and raised $\frac{1}{2}$ m.m. above the general conjunctival surface. Each mass has four to five m.m. in vertical length and 1 m.m. in horizontal breadth. The tarsal conjunctiva was in the follicular stage of trachoma. Extending completely around the limbus was a raised edematous pannoid growth, extending uniformly on the cornea for a distance of 3 m.m. but having a central zone of clear cornea. There was no evidence of iritis. Pathologic examination showed a few Koch-Weeks bacilli, large mononuclear cells, small mononuclear, and a few polynuclear cells and only

two or three eosinophiles to the slide. The so-called trachoma bodies were abundant.—*Dr. R. Granville Waddy in the Ophthalmoscope.*

WM. SPENCER, M. D.

A TRAUMATIC CORNEAL ULCER.—A corneal ulcer fairly extensive in the prepupillary area of the right eye and accompanied by a moderate amount of ciliary and conjunctival injection. This steadily got worse despite the treatment. A few days later he commenced to have pain in the left (uninjured) eye, suggestive of sympathetic ophthalmia. There was intense ciliary and conjunctival congestion, marked iridocyclitis and severe photophobia, pain and chemosis. There was a large quantity of pus in the anterior chamber and the whole aspect suggested acute infection, so much so, that despite the fact that pus in this region is usually sterile. It was decided to perform paracentesis. Next morning, therefore, under a general anaesthesia, the anterior chamber was opened at the lower margin of the limbus, a large quantity of pus evacuated and we washed out with saline. This was repeated on the following day. The patient made a good recovery for some time and, ultimately, after the removal of several carious teeth was discharged.

On dismissal, there was a slight central nebula which is rapidly clearing up under the influence of ung. hydr. ox. flav. and a solution of atropine with mere. sol. and bell. internally. The pain and discomfort have also gone from the sound eye, which rather negatives the idea of sympathetic

The interest of this case lies in the somewhat unusual treatment, for it is generally advised to allow pus in the anterior chamber to absorb. The pus in this case swarmed with pneumococci, which organism is very frequently in these eye conditions. If left, it would undoubtedly have resulted in a panophthalmitis with total loss of the eye and probably sympathetic ophthalmia.—*Journal. Ophthal., Otology and Laryng.* Wm. Spencer, M.D.

PITUITRIN ITS ABUSE AND DANGERS.—A. J. Rongy and S. S. Arluck, New York, *N. Y. Medical Journal*, May 2, 1914.

1. Pituitrin does not induce labor pains.
2. It should not be used in the early part of the first stage of labor, for its action is too transient.
3. It should not be used in complete inertia because of danger of rupture of the uterus.
4. It is contraindicated in cases of dystocia due to malposition or contracted pelvis.
5. It should never be used in cases in which a sudden rise of blood pressure may prove dangerous.
6. A single dose of pituitrin may be used as an adjuvant in cases where pregnancy is interrupted, either by catheter or bag, and only when contractions of the uterus have already set in.
7. It should be used only in cases in which the cervix is dilated or dilatable and the presenting part engaged in the pelvic outlet.
8. It should be used cautiously in cases in which the fetal heart sounds are feeble or irregular.
9. It should never be used unless a general anesthetic is within easy

reach, for the contractions may become so violent that rupture of the uterus becomes imminent.

Finally, the conclusions reached in this paper are based purely on personal observations of the action of this drug in a very large series of cases. We feel that it may not be in accord with the experience of many other observers, still we maintain that in order to obviate many complications, which at times may become very dangerous, this drug should be used conservatively.

We appreciate its value when properly used; we realize its dangers when given injudiciously, and we cannot but advise the general practitioner to be conservative in its use.

SEPTIC PUERPERAL INFECTION AND ITS TREATMENT.—Vineberg, in the *Canadian Medical Association Journal* for March, 1914, says that having concluded from our bedside observation that we are dealing with a puerperal infection, our next step should be directed to endeavor to ascertain the form and the course it is likely to follow. To do this a careful local inspection should be made, followed by a bimanual examination of the pelvic contents and, if possible, by a digital exploration of the uterine cavity. The perineum and vaginal canal should be thoroughly inspected for any tear or abrasion, and if such is found a note should be made of the appearance of its surface, whether it be clean-looking or covered with a grayish membrane. If the perineum has been sutured, the sutures should be removed, so that the wound may be thoroughly inspected, remembering, however, that the infectious organisms may enter through such a wound and yet cause little or no local reaction. In such a contingency the infection rapidly becomes general and leaves us in no doubt as to the nature of the case. In the majority of instances, however, the organisms are not so virulent; they cause a local reaction and travel upwards along the blood or lymph vessels, more frequently along the latter. In that instance an exudate or peritonitis develops, with the signs and symptoms that accompany them. The treatment of infected areas in the perineum or vaginal canal should be based on general surgical principles of cleaning the wound and providing for free drainage. Next, the cervix should be exposed with a suitable speculum and note taken of its tears or wounds. Having failed to find any probable site of the infection in the perineum, vaginal canal, or cervix, the further step should consist in making thorough exploration of the uterine cavity with the finger or fingers. We are safe in asserting that fully 90 to 95 per cent of the cases of puerperal infection originate in the interior of the uterus. A very large percentage of these are due to placental remains. A digital exploration of the uterine cavity is not always easy of execution, and may call for general anesthesia.

It may be well to draw attention to the fact that placental residues, even of good size, do not always manifest themselves by hemorrhages or fetid lochia, as is generally stated. Vineberg has frequently observed them in cases in which neither of these symptoms were present. Having found placental remains, what is the treatment to be instituted? Here we encounter a great diversity of opinion. At the present time the trend is toward a "let-alone" policy unless there be hemorrhage. Vineberg is not

in sympathy with such an attitude, and is of the opinion that the careful removal of such infected products of gestation will frequently arrest the process or aid very materially the economy to overcome the infection. How is the removal to be accomplished, with the finger or with a sharp or dull curette? Many a lance has been broken on this point. It seems a matter of less importance what is to be done and as to how it is done. One man may accomplish the object in view better with his fingers than he could with an instrument. Another feels safer with the use of the sharp or dull curette. Vineburg confesses to belong to the latter class.

A great deal has been said and written upon the dangers of breaking down the protection wall which nature forms underneath these infected tissues in the uterus. Based upon this fear, an author (T. J. Watkins, of Chicago) recently has advocated the packing of the uterus with gauze, in order to effect a separation and expulsion of the placental remains. It would be difficult to conceive of a more dangerous procedure. If we have learned anything in the past years in the matter of infection it is that there is no better way of making a local a general infection than by employing means to prevent drainage, and to place the infected area under high pressure. Every one to-day recognizes that a strip of gauze in the uterus, even as a drain, interferes with rather than facilitates drainage, leaving aside the fact that it is always increased by decomposition. If gauze used loosely as a drain acts just in the opposite manner, what will it do when it is packed tightly and kept in position for twenty-four hours?

After removing the placental remains, it is his custom to irrigate the uterus either with 50 per cent alcohol or a weak solution of iodine. Thereafter the uterus is religiously left alone. Ergot, strychnine, and quinine are given in suitable doses to aid uterine contractions and involution.

The indiscriminate use of the curette cannot be too strongly condemned, and one cannot emphasize too forcibly the great harm that may be done when it is employed in a haphazard manner, as frequently is the case. His advice would be, when in doubt do not use the curette; usually the opposite course obtains, and because the patient has fever she is subjected to a curettage. It is scarcely necessary to add that the curette should not be used for septic and gangrenous endometritis; hence there is great danger of breaking through the protective zone which nature forms, leaving aside the impossibility of removing all of the diseased endometrium. It is doubtful, even, whether intrauterine irrigations in these cases do not do more harm than good. If the discharge be very profuse an occasional irrigation with some bland fluid to wash away the excess of discharge may be beneficial.

The formation of an exudate is, as a rule, a favorable omen and is nature's method of limiting the infective process.—*Therap. Gazette.*

THE RELATIONSHIP BETWEEN OVULATION, THE CORPUS LUTEUM AND MENSTRUATION.—Ruge (Berlin) has shown the existence of a certain relationship between ovulation, the formation of the corpus luteum and the cyclic changes in the endometrium. The bursting of the follicle and the early stages of the formation of the corpus luteum occur in the first 14 days before menstruation: at the same time in the uterine mucosa exist the con-

ditions characterizing the menstrual or interval changes. The stage of vascularization and full growth of the corpus luteum are associated with premenstrual conditions of the mucosa, and are found in the second half of the intermenstrual period. The full growth of the corpus luteum continues until the beginning of menstruation. Retrogression of the corpus luteum mostly begins at the occurrence of menstruation and is associated with menstrual or interval mucosa. Developed corpus luteum and destroyed follicles never coexist; each excludes the existence of the other.—*Arch. f. Gyn.* 100—21.

THEODORE J. GRAMM, M. D.

THE CORPUS LUTEUM AND MENSTRUATION.—Meyer (Berlin) has made some interesting histological studies concerning the relationship between the ovum and the corpus luteum to menstruation. The article is of interest because of the growing recognition of the importance of the corpus luteum and its relationship to the cyclic changes in the endometrium. Stated in the briefest terms the author has shown that the fate of the ovum even during its development determines the changes in the follicle. The formation of a Graafian follicle depends upon a certain grade of maturation. Impaired maturation signifies destruction of the ovum and the follicle atrophies. The follicles atrophy when impregnation takes place. The author has also shown that the corpus luteum undergoes certain cyclic changes coincident with menstruation. Other authors have also and possibly more fully studied this important fact. In regard to conception, it is shown that that ovum becomes impregnated which leaves the follicle during or after menstruation. Menstruation indicates the death of the ovum of the previous ovulation. The presence of a mature ovum may be sufficient to induce the transformation of a follicle into a gland having an internal secretion. Lutein formation is therefore induced by a mature ovum.—*Arch. f. Gyn.* 100—1.

THEODORE J. GRAMM, M. D.

CARCINOMA OF THE BODY OF THE UTERUS.—Weibel has recorded the clinical facts relating to 69 cases at Wertheim's clinic. Among this number two were inoperable. In 15 per cent. the cancer was accidentally discovered. In 19 instances the disease was associated with myoma; five times with cysts of the ovary; four times with carcinoma of the ovary, and once each with ovarian sarcoma and cancer of the tubes. The most important symptom is hemorrhage, especially when it occurs some time after the climaxis. Fifty-one cases had atypical or severe hemorrhage sometimes combined with sanious discharge; three cases had the latter symptom alone, one had swelling of the legs and pain, two had purulent leucorrhœa, one with ovarian involvement had pain and tumor in the abdomen, and in seven cases there was only irregularity of the menstrual period. It is noteworthy that corpus carcinoma more often involves the ovaries than does cancer of the cervix. Attention is also called to the coexistence of cancer and myoma. Operation has a high primary mortality; in this series it was 10 per cent. From the abdominal operation the mortality was 25 per cent., while when the vaginal operation could still be done the mortality was 2.8 per cent. Permanent cure after five years was 51.2 per cent.—*Arch. f. Gyn.* 100—135.

THEODORE J. GRAMM, M. D.

THE TREATMENT OF RUPTURE OF THE UTERUS, AND OF PERFORATION OF THE UTERUS. Sigwart (Berlin) says the treatment consists essentially in stopping the hemorrhage and preventing general infection. From peritonitis many cases have died who withstood the dangers of hemorrhage. If the woman is delivered and the hemorrhage is profuse, the Momburg hose or bandaging the legs should be used, and the patient removed to the clinic. If the fetus has not escaped into the abdominal cavity, it should be delivered together with the placenta. The question is not to be answered off-hand what shall be done when after rupture the fetus is quite or partly within the abdominal cavity. Frund advises that it shall be immediately removed under all circumstances. Franz, on the other hand, believes this to be an error since thereby the tear may be enlarged and the hemorrhage increased. The author believes the fetus should be cautiously removed in order to allow the uterus to contract and also in order that from uterine retraction or from certain motions on the part of the woman, the partly escaped fetus shall not entirely be extended into the peritoneal cavity or parametrium. In the clinic operation is indicated. If the rupture is incomplete vaginal hysterectomy may be done. If there is any uncertainty the abdominal route is preferable and the uterus must be removed. Parametrial hematoma may be removed by opening the folds of the ligamentum latum. After abdominal hysterectomy the wound is to be carefully covered with sero-serous peritoneal suture.

In uterine perforation in early pregnancy, if the perforation is small the case is not at once operated. If the perforation is large or if the intestines are probably injured the abdomen is opened, the uterine wound sewed with deep sutures and covered over with peritoneum. The sutured point of perforation is placed extra-peritoneal, preferably in the lower angle of the abdominal wound. It is not necessary to remove the uterus.—*Arch. f. Gyn.* 100—196.

THEODORE J. GRAMM, M. D.

GNOCOCOCCUS VACCIN IN GYNECOLOGICAL CASES.—Hauser (Rostock) summarizes his results, at the close of an extensive article, as follows: In all cases of adnexal swelling, even in those having distinct tissue formation, in which no complete cure could be expected, there was a distinct improvement in the general condition. The patients increased in weight, and the appetite increased as also their ability to work. In cases of old adnexal tumors the improvement was but slight, while in inflammatory tumors of more recent origin and in hydrosalpinx the result was surprising. In chronic cervical gonorrhœa the results were not bad; so also when the bladder was affected; likewise in Bortholinitis and in gonorrhœal arthritis. Of course old connective tissue changes, adhesions, etc., cannot be removed with vaccine therapia. The vaccine should not be used during menstruation, nor during acute or chronic peritonitic manifestations. The treatment is by no means free from certain dangers, and had better be used only during hospital observation.—*Arch. f. Gyn.* 100—305.

THEODORE J. GRAMM, M. D.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

ANACARDIUM. Maliciousness—swearing. Loss of memory. Crampish pains in the muscles. Contraction of the joints. Sensation of a band or hoop around the parts. Pain in different parts as if a plug had entered. Trembling debility and paralytic weakness. Diminution of the senses (smell, light and hearing). Liability to catch cold, and sensitiveness to the draft of air. Periodicity of the symptoms. Itching of the skin, worse from scratching. Many symptoms appear after eating while more of them disappear during dinner. Aggravation when lying on the side, from rubbing, and from taking hold of anything.—*Lippe Manuscripts.*

CAMPHORA.—Diminished circulation of the blood to parts most distant from the heart (coldness of the external body). Color of the face bluish. Sudden sinking of strength. Pains as if bruised in inner parts. Great sensitiveness to cold and cold air. Loss of sensation. Cracking of the joints. Rheumatic stitches in the muscles. Attacks of convulsions, with falling down and loss of consciousness. Most symptoms appear during motion and at night; are aggravated by contact, cold air and when thinking of them. Amelioration from warmth. Asiatic cholera.—*Lippe Manuscripts.*

ACONITUM NAEPELLUS.—Sensation of soreness of the body, and of heaviness in inner parts. Tearing in outer parts. Tingling (fingers, oesophagus and back). Painfulness of the whole body to contact (he does not wish to be touched). Pulsating pain (head and teeth). Inflammation of inner parts (mucus membrane). Stitches in internal organs. Tightness of the muscles. Acute rheumatism. Congestion to various parts. Apoplexia sanguinea. The pain is insupportable, driving to despair. Bad effects from catching cold. Bad effects from anger or from fright with anger, especially with females during menstruation. When rising fainting with paleness of the face. Sudden and great sinking of strength. Aggravations in the night. Amelioration in the open air. Most symptoms disappear while sitting quietly, but at night in bed it is insupportable. Restlessness, inconsolable anxiety, full of fears, lopes about as if in agony. Dryness of the skin and heat, burning of the skin. Miliaria purpurea. Heat, with inclination to uncover oneself. Eruptions like measles. Pulse full and hard, or imperceptible.—*Manuscripts of Adolphus von Lippe.*

AGARICUS MUSCARIUS.—Great sensitiveness of the body to pressure and cold air. Great debility and heaviness in the limbs. Boring pain. Dull pain. Soreness (nose and mouth). Tearing pains (face and legs). Twitching (eyelids). Clonic spasms. Itching, burning and redness as if frost-bitten (nose, ears, fingers and toes). Tearing pain in the limbs continuous while at rest, disappearing when moving about. Symptoms frequently appear diagonally (right arm and left leg). Complaints arising from coition. Aggravation after motion. Amelioration when moving about slowly. Excess of fancy. Ecstasy.—*Manuscripts of Adolphus von Lippe.*

ARSENICUM.—Chronic diarrhoea of malarial origin. Motions, of a yellowish or darkened color, glairy, undigested in character with a foetid odor and very irritating. With this condition there is associated pains of a violent character in the abdomen, with rectal burning and tenesmus. There is marked weakness and rapid wasting.—*Paul Chiron, L'Homœopathie Française.*

GRAPHITES.—Chronic diarrhoea. The stools are brownish liquid, and mixed up with undigested material. The stool is very highly offensive. There is nocturnal aggravation and aggravation after having taken cold. Abdominal distension is apparent as is abundant expulsion of very foetid gas, preceded by colic. Dr. Chiron considers the remedy very serviceable in fat individuals who are soft skinned and subject to eczematous or herpetic eruption.—*Paul Chiron, L'Homœopathie Française.*

A CASE OF MIRBANE POISONING.—Contemporary literature often affords the careful observer a deep insight into the indicated usefulness of a homœopathic preparation by a consideration of massive toxic effects induced inadvertently on an unwilling "prover." Dr. Graham Grant has published the following note on a case of poisoning by mirbane or nitro-benzene which recently came under his observation:

Nitro-benzene, or mirbane, possesses a strong and pleasant odor of bitter almonds; its taste is not at all unpleasant; it is yellowish-brown in color, and a statement that the liquid might be diluted and consumed as a beverage might not appear improbable to ignorant persons. It is being sold in the commercial world by the gallon and without restriction.

A. B. collects waste-paper in city offices. He found while doing so four small bottles which he carried into the street and showed to an inquisitive passer-by, who offered the opinion that the stuff was a good spirit for cleaning clothes. This view was accepted by several persons, and a boy obtained one of the bottles, which he gave to C. D., telling him it was "a good spirit" but, according to C. D. he did not add "for cleaning clothes." The latter took it home and placed it on the chest of drawers. Two days later he suggested to his wife who had been ill for some time, that a little of the contents might do her good. He gave her some and took some himself, how much can only be surmised from the fact that it was a 2-ounce bottle; if it was full at the time they must have drunk about $\frac{1}{2}$ ounce between them, as there was $1\frac{1}{2}$ ounces left. This took place about 10.30 P. M. and I was called at 11.15 by the landlord. On my arrival I found the man of an ashy pale color and much distressed; the pulse was weak, the pupils were somewhat dilated and equal; in mind he was rational. I instructed a

constable to give him an emetic of salt and water while I turned my attention to the woman. She was comatose, deeply cyanosed, the pulse was almost imperceptible, and the breathing stertorous. The breath of both smelt strongly of bitter almonds. I washed out the woman's stomach with salt and water and injected strychnine subcutaneously, but she was clearly past aid and died at 11.45 P. M. The man had copious emesis and the vomit had the characteristic smell. I decided to send him to the infirmary on an ambulance, but as soon as we attempted to move him, he collapsed and had to be carried downstairs.

By the coroner's order Dr. Graham Grant made a post-mortem examination and found evidence of alcoholism, some atheroma of the aorta, chronic bronchitis, and nephritis, but these conditions were not sufficiently advanced to have had a material influence in bringing about the death of the patient. There were numerous points of congestion in the brain and an excess of fluid in the ventricles. The blood was of a magenta color and coagulation absent; it seemed also to be greasy. The examination showed nothing more of interest.

At the inquest the man C. D. gave evidence, generally to the effect Dr. Grant has indicated, until he was asked, "Was the taste unpleasant?" To this he was unable to give a definite answer, and to settle the point Dr. Grant tasted it himself. He did so by inverting the bottle on his finger-tip, which took up probably two drops or thereabout. At first, Dr. Grant was only able to say, "It has a sweet, burning taste and not repellant." The coroner suggested that perhaps the doctor had not taken enough; but he subsequently found out that he was quite wrong in this respect. In a few minutes Dr. Grant felt a numbness of the tongue—somewhat like that produced by cocaine; this was followed by salivation. The doctor experienced slight swimming in the head and he thought for the moment the court was too warm—but this passed away while he was giving evidence, and may, perhaps, have been due to the smell rather than the taste. I tasted the mirbane at 11 A. M. and the vertigo was transient. The salivation lasted about an hour, and the numbness of the tongue about three hours.

As the coroner remarked, "This is a case of great public importance, and the sooner mirbane is placed on the list of poisons the better," with which opinion I think all will agree.

According to Thorp's Dictionary of Applied Chemistry (1912) mirbane, or essence de myrbane, was first manufactured in France by Collas. It was used to scent soap and as a bitter almond flavoring. It is chemically nitro-benzene, more commonly spoken of as nitro benzol. Dr. J. C. Cain, the author of the article in Thorp's Dictionary, states as follows: "When the nitro-benzol is to be sold as 'mirbane' it is distilled under diminished pressure in order to obtain a perfectly clear and transparent liquid such as the users of mirbane demand. It is customary to use toluene imperfectly freed from benzene for this purpose, that article being cheaper and yielding a somewhat more fragrant myrbane than benzene alone." In the work, "Poisons: Their Effects and Detection," by A. and M. Wynter Blyth, it is stated that one gram (15.4 grs.) would probably be sufficient to kill an adult, and that spirituous liquids especially hasten and intensify the action of nitro-benzene, so that a drunken person, *ceteris paribus*, taking the poison with spirits would be more affected than taking it under other condi-

tions. In one case which occurred in Vienna a woman who took about $3\frac{1}{2}$ ounces, and was admitted into hospital in a highly cyanotic condition with small pulse and superficial respiration, eventually recovered. Following are characteristic effects which should be of value in using the dynamized drug for identical states as seen in a sick person. "It is stated that the more characteristic pathological appearances seem to be dark brown or even black color of blood, which coagulates with difficulty, venous hyperemia of the brain and its membranes, and general venous engorgement. The blood gives the spectrum of acid hematin, its power of carrying and imparting oxygen to the tissues is diminished, and its content of carbon dioxide increased. It is further stated that on drinking the poison there is a burning taste in the mouth shortly followed by very striking blue or purple appearance of the lips, tongue, skin, nails, and even the conjunctivae. Discoloration may precede vomiting by as long as an hour; the skin becomes cold, there is great depression, the pulse is small and weak, and the breathing slow and irregular; this is followed by the sudden development of unconsciousness, and the whole condition may closely resemble apoplectic coma. The shortest period mentioned in which nitro-benzene has caused death is four or five hours. Inhalation of the vapor of nitro-benzene produces symptoms similar to those of alcoholic intoxication, deepening into a coma. 'Benzene Collas' used to be, and perhaps still is, a very popular domestic application for taking grease spots out of cloth."—*Dr. Graham Grant, British Medical Journal.*

GEORGE BERNARD SHAW ON THE HOMOEOPATHIC PRACTICE.—"In the face of such economic pressure as this, it is silly to expect that medical teaching, any more than remedial practice, can possibly be scientific. The test to which all methods of treatment are finally brought is whether they are lucrative to doctors or not. It would be difficult to cite any proposition less obnoxious to science than that advanced by Hahnemann: to wit, that drugs which in large doses produce certain symptoms, counteract them in very small doses, just as in more modern practice it is found that a sufficiently small inoculation with typhoid rallies our powers to resist the disease instead of prostrating us with it. But Hahnemann and his followers were frantically persecuted for a century by generations of apothecary-doctors whose incomes depended on the quantity of drugs they could induce their patients to swallow. These two cases of ordinary vaccination and homoeopathy are typical of all the rest.—*Preface by Shaw in the Modern Play, "The Doctor's Dilemma."*

ETIOLOGY OF CHOREA.—G. Graboïs. (*These de Paris, 1913*). This thesis is a study of chorea based on 136 cases in the Paris Pediatric Clinic of Professor Hutinel. It is interesting to find this disease, hitherto considered a nervous affection, ascribed to a transitory meningoencephalic condition. It is principally found following cases of rheumatism, but also after measles, scarlet fever, mumps and other diseases. Three out of the 136 cases ended in death, which was caused respectively by typhoid infection, anemia and heart trouble.—*Archives of Pediatrics.*

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THE MENTAL INFLUENCE OF DRUGS.

BY

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(Read before the American Institute of Homœopathy, June, 1914.)

Not only is it true in the dominant school of medicine, but throughout the medical world generally surgery and expectancy have, to quite an extent, crowded the finer uses of drugs into the background.

No sensible man will decry surgery inside its legitimate field of usefulness, (and that field generally opens when drugs are of no further avail), but may not drugs many times be productive of more positive and better results than the "waiting watchful" policy of expectancy so often followed at the present time? Is it possible that the many Herculean tasks represented in the field of drug pathogenesis of the past century are to be relegated to oblivion, and the therapeutic verifications of these pathogenetic results set aside as of less importance than expectancy?

We still claim to have a homœopathic school, and those who are graduates of institutions classed as homœopathic colleges, claim to be representatives of that school, but do the majority of these graduates have a practical, working faith in homœopathy? Beyond a few fundamental homœopathic indications for a few drugs—now shared in common with all medical practitioners—do these modern graduates persistently endeavor to practice homœopathy to the best of their ability? In the modern rush of new ideas, and the electric speed at which

we are living generally, I fear we older men also do not altogether escape the prevalent suspicion of lack of thoroughness in our application of the law of similars.

It is true that the therapeutics of the dominant school have become much more rational than a generation ago, but in this beneficent advance in the methods of healing the sick is there no longer room for homœopathy? We contend that there is.

The elaborators of toxins and sera tell us many things which are not new to us. The electro-therapeutist corroborates the *milde macht* of drugs in his discovery of the power of radio-active agents. The experimental psychologist opens up a dazzling vista of possibilities when he suggests a significance for the vagaries of dreamland. Why then should we who say we believe in law in therapeutics, who claim that a particular law has been indefinitely verified and established beyond question, and further have the knowledge to continuously extend these verifications, why should we permit ourselves to be led by those who are as well qualified to follow as are we?

We are now told that all physical conditions produce definite mental attitudes, the result of transmission of the influence of physical disturbance through the nerve tracts to the mind; and *vice versa*, it has been shown that mental states are capable of producing profound conditions in the physical body.

Retracing our steps back to the days of the great German Hippocrates, Hahnemann, we find that this interdependent relationship was not unknown to this sage. We find him teaching the prime importance of taking into consideration the mental manifestations of the patient about to be treated for some physical ailment.

This being true we are justified in our conclusion both by the philosophy of the giant of Meissen and by the claims of modern science, that in endeavoring to heal the sick it is wise to consider both the mental and the physical condition of the patient. Furthermore, it is not necessary to open a new field of drug pathogenetic experimentation to discover the means for surrounding the patient in a thoroughly expert and scientific manner, because of the fact that enough significant experiments have already been made to enable us to make practical application of drugs not only to physical conditions, but also to manifestations in which the mind plays a paramount part. Not only have these finer effects of drugs upon the mind been reported by the pathogenetic experimenter, but the

therapist has many times verified these *previsional* claims of the experimenter.

Let us examine into the soundness of our contention.

Back of every organ and tissue of the human body, and of the various functions of these organs and tissues is that animating something we call nerve force; and back of this nerve force is an intangible agency by which the supply of this force throughout the whole organism is more or less influenced. This agency is generally known as mind, and, as is well known, its influence is not limited to the nerves included in the cerebro-spinal system, but the boundary between this system and that through which the vegetative functions of the organism are maintained is not infrequently crossed, and for good or for bad a greater or less effect produced.

Such being the case we are not surprised that influences travelling over the various nerve tracts may be reversed, and disturbances of greater or less import at any point in the organism, from the extreme periphery to the nerve centres, register these occurrences in the mind. Consequently, through the afferent and the efferent provisions of the nervous system, we find mental disturbances producing a logical sequence of results in the gross physiology and even the anatomy, and *vice versa*. Any agent, therefore, which influences the mind may ultimately produce an effect upon an outlying organ or tissue, and any agent causing disturbance in an organ or tissue may produce a mental effect. It is not always easy to trace the cause of either mental or physical changes back to their sources, but the time may come when man will be able to solve many more of these problems of physiological and psychological effects than he is now able to do.

It is a well known fact that the kind of food one eats not only produces its effects upon the physical structure of the body, but that it also may be classed among the influences that have much to do with mental development. This being the case it is quite reasonable to assume that not only will food produce mental attitudes and conditions, but that other substances or influences brought to bear upon the histological elements of the organism may produce mental results. We are, therefore, prepared to find as a result of experiments with drugs upon the healthy human organism, various expressions of mental deviation from the normal; and not only are these mental effects of drugs the result of the influence of the drug

upon some other part of the organisms, but apparently there are drugs that act directly upon the mind—or at least nerve centres—without the intervention or involvement of any other organ or tissue. While this direct approach may be true of some drugs, yet the average drug appeals to the nerve centres—and ultimately the mind—through the blood stream as the medium of approach. Drug modification of the opsonic index and the stimulation of phagocytosis has nothing to do with the point at issue.

It is therefore quite probable that no change is produced in the general organism that does not to a greater or less extent influence the mentality of the individual, and it is, consequently, not surprising that a study of drug symptomatology reveals a great variety of mental disturbances due to drug ingestion. These disturbances may be divided into two great classes of tendencies, one of exhilaration and the other of depression; and in turn these two classes may be subdivided into deviations subject to control, and to uncontrollable deviations.

Although the mental effects of drugs may be grouped in a general way, yet each drug is an individual in its symptomatology and not interchangeable with other drugs excepting in its grosser effects. For example, the following twenty-six drugs produce more or less mental depression, but each drug may by careful study be differentiated from its analogues: Puls., china, bry. alb., sulph., arsen. alb., cinic., staph., rhus tox., phos., chelid. maj., anac., nat. mur., aurum, acon., arg. nit., chin. sul., cocc., cuprum, cactus, ferrum, ignat., lil. tig., nit. ac., silic., thuja and ver. alb.

Not only does the mentality of each of these agents differ, but the concomitant detailed effects upon the more material parts of the body also differ. Investigation will show that mental depression caused by hepatic derangement is not identical with mental depression caused by uterine derangement, or anæmia, or cardiac involvement. It will also be found that the mental depression of all drugs affecting the heart, is by no means identical. For example, both cactus and digitalis produce a state of anxiety; the former becoming hypochondriacal with inclination to weep, while the latter has no such lachrymose tendency, but in its place has a weakened memory.

Extending investigation still further into the field of lachrymosis, it is discovered that besides pulsatilla, there are sulphur, chamomilla, cina, natrum muriaticum, ipecacuanha, apis mel-

lifica, aurum and ignatia, all causing a tearful state, but each having concomitantly different conditions.

That great therapeutic mantle of charity, sulphur, because of its wide field of operation, is more difficult to differentiate in the causative field of mental symptoms than any of its analogues. As Dr. T. F. Allen says, "Since Sulphur is an integral part of every form of protoplasm, it follows that all tissue becomes affected by its abnormal exhibition, and no particular limit or character can be assigned to it." It may therefore be said that if the homœopathic practitioner is ever pardonable for the routine prescription of a drug, sulphur is that drug. Possibly, however, the anxious, melancholy, tearfulness of sulphur may be due to derangement of the portal circulation in which hæmorrhoidal congestion is conspicuous.

The peevish, "cantankerous" condition of the crying children in whom chamomilla is indicated, finds its origin in a nervous erethism caused by irritation of the terminal nerve filaments, whether due to intestinal disturbance or to dentition. Cina depression owes its existence to intestinal irritation also, but usually the presence of parasites may be responsible.

Another lachrymose drug is natrum muriaticum, and being a drug with wide spread influence upon the organism, acting as it does directly upon the blood, the lymphatics, the liver, the spleen, and the digestive tract, a general condition of misery is doubtless the cause of the mental depression, melancholy and tears. Especially in long standing cases of malarial manifestation is the mentality of natrum muriaticum in evidence, and it is here some of its greatest victories have been achieved.

The peevish, irritable, impatient crying of children which is subdued by ipecac., may have the cause of the trouble traced to the intestinal tract, due often to over-eating of rich food.

The changeable moods of ignatia—laughter alternating with tears—most frequently find their cause in derangement of the spinal cord; but those cases in which the patient suppresses grief and seeks solitude in which to shed tears, find their origin in some sudden psychological shock to the nervous system.

With the drugs causing mental exhilaration, including belladonna, stramonium, agaricus muscarius, coffea, and cannabis Indica, the same differentiation of the origin of the mental deviation is possible.

Among the definite delirium-producing drugs are belladonna, stramonium, hyoscyamus, agaricus, coffea, cannabis Indica,

baptisia, rhus toxicodendron, apis mellifica, lachesis, absinthium, and veratrum album. Of this group of drugs, in the three solanaceæ, belladonna, stramonium, and hyoscyamus, the delirium is very closely allied; belladonna is usually associated with the greatest degree of circulatory disturbance, hyoscyamus is more purely neurotic, with milder delirium, while stramonium is most violent of the three. The tendency of the last two drugs is to perverted sexuality, while there is little of this tendency in belladonna.

The mental influence of agaricus results in pre-eminent lack of co-ordination of ideas, which is expressed in inconsequent, garrulous babbling, and characteristically consistent with this mental state are the choreic muscular movements and twitchings.

The delirium of bryonia alba is due to circulatory disturbance, notably in typhoid fever, in which the nerve centres are poisoned, its character being quite distinctive, as we all know.

Cimicifuga delirium is purely neurotic, and trenches upon the sleeping hours of the patient, when terrifying dreams of wild animals occur.

Like bryonia, gelsemium owes its mental state to circulatory disturbance, primarily, and secondarily the nerve centres being subjected to typhoid poison produce mental dulness and ultimately sluggishness degenerating into complete unconsciousness, and concomitantly the whole motor sphere of the cerebro-spinal system is quiescent.

Even more decided in typhoid fever is the besotted stupor of baptisia. Add to this its characteristic delirium and we have a mental picture which is quite distinctive.

Another typhoid-delirium drug is rhus tox., which is not at all difficult to differentiate, through its mentality, from the drugs mentioned—to say nothing of its general concomitants.

The cause of the characteristic shriek of apis, breaking through its stupor, we recognize as serious meningeal trouble; but ovarian irritation may be accountable for the irritable, waspish mood sometimes found in jealous women.

The jumping from one subject to another in septic states—doubtless when active leucocytosis is present—whether due to typhoid, diphtheria, suppurating wounds or gangrene is quite characteristic of lachesis.

The terrifying hallucinations and brutal insanity of absinth., find their cause in the persistent congestion of cerebral centres.

Cannabis Indica is one of the most remarkable drugs known, in its field of mental perversion. It is distinctively a neurotic drug, acting apparently directly upon the nervous system; the character of its mental influence being an exaggeration of the habitual tendencies of the mind of the experimenter, whether for good or bad. In fact its most dominant hallucination is exaggeration of any idea entertained. All the special senses are acute and all impressions are incalculably magnified, whether of sight or hearing, pleasure or pain.

The mental symptoms of *veratrum album* may be, and usually are, due to direct action of the drug upon the brain. This applies especially to the mania of the drug, with its raging and screaming; but the bowel condition may be responsible for the great depression of spirits.

Among other drugs causing various mental symptoms, mercury may be cited. Its weak memory is doubtless due to a profound disintegration of the blood, similar to the effects of syphilis; the weak memory of *staphisagria* is due to prostatitis with accompanying spermatorrhœa; the mental depression and weak memory of *lilium tigrinum*, result from derangement of the uterus or ovaries, or both; the suicidal tendency of *aurum*, due in some instances to a degeneracy of vital organs, especially great hyperplastic congestion of the uterus, or to its direct action upon the brain, in some instances mercury or syphilis or a combination of the two being the cause; and the suicidal tendency of *arsenicum*, due to the run down miserable state of the system resulting from anæmia even of the pernicious kind.

Among other drugs with definite mental influence, *cactus*, *natrum muriaticum* and *china*, may be cited as all having a desire for solitude, but each having concomitant conditions entirely unrelated and which serve to clearly differentiate the prescription of the respective drug. The heart is the organ we would expect to find involved when *cactus* is needed, faulty metabolism probably due to malaria would call for *natrum muriaticum*, and a depleted state of the organism due to loss of fluids would point to *china*.

On the other hand, there is a group of drugs which is indicated when the patient is indifferent to his surroundings. Among them we find *sepia* indicated when the sexual sphere is involved, *hamamelis* when the circulatory system is at fault with resulting hemorrhage, *phosphorus* in gravely depleted

nerve force and disorganization of red blood corpuscles, helleborous when there is serious meningeal trouble, and phosphoric acid when there has been over-exertion of mind or body, sexual excesses or grief.

Another group of drugs we find indicated in hypersensitive-ness to extraneous impressions. Among them is *pulsatilla* with its sexual involvement, *belladonna* with its arterial congestion, *arnica* with its typhoid tendency or results from mechanical injury, *chamomilla* with its primary influence upon the nervous system, or possibly the liver or digestive tract mucous membrane, *coffea* with its direct action upon the nervous system, and *lillium tigrinum* with its characteristic sexual system derangements.

With drug pathogenetic prediction of the usefulness of the foregoing drugs, under the circumstances noted, together with the multitude of repeated clinical verifications of these *pre-*visional suggestions, is the practical physician justified in substituting modern expectancy for what is offered in this field of mental therapeutic possibilities?

Surgery in its proper field is good; expectancy is sometimes better than poor therapeutics; but drugs intelligently used may prevent conditions from drifting into the field of surgery, and always offer greater possibilities for good than does expectancy. It is wise, therefore, for the medical practitioner to become thoroughly versed in drug symptomatology, and as mental expressions are more certainly indicative of the character of the derangement of the various organs and tissues of the body than any other class of subjective symptoms, it follows that the patient's mentality should be most carefully studied by the practitioner of medicine to the end that he may be able not only to palliate conditions, but that he may through this knowledge restore the patient to health, which is the greatest of all human blessings.

Outside the pale of homœopathy there is very little information discoverable of how to base drug prescription upon mental symptomatology, although, as already stated, mental attitudes and even dreams are seriously considered by the modern psychologist. The knowledge at the command of the modern homœopathic practitioner renders him familiar, not only with mental states in disease and parallel mental effects of drugs upon the healthy, but also reveals to him a law upon which to prescribe these drugs in physical and mental derangements.

The logical conclusion is, therefore, that, although under stress of some circumstances expectancy may be justified, yet there is not only room for homœopathy among the modern methods of healing the sick, but that a knowledge of homœopathy is one of the essentials of the modern scientific physician.

CLINICAL SUGGESTIONS CONCERNING PUERPERAL SEPTIC STATES.

BY

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(Read Before the New Jersey State Homeopathic Medical Society, Ocean City, N. J.)

It is my desire, during the time at my disposal, to direct your attention to a resume of that chapter in obstetrics which has to deal with puerperal infections, or more broadly, with the appearance of fever in the puerperium.

I invite your free discussion of my notations in order that the subject matter presented may be conducive of the most practical value. It must be granted that the frequency of puerperal sepsis today is materially reduced, compared to that of years past; yet, in view of the fact that the proportion of cases infected is still far too high, and in view of the fact that at the present time there exists wide diversity of opinion as to differential diagnosis and therapies, this topic must be one which demands frequent, careful consideration and thorough discussion, in order that we may learn and achieve greater advance in modern midwifery. Within the past two years, it was deemed essential to develop a commission in this country, composed of representative obstetricians, to study this subject and determine some definite basis for the classification, diagnosis, nomenclature and treatment of infections occurring in the puerperal period. This commission issued a circular letter, to be sent to all obstetrical clinicians, asking for individual views upon these points. Among the questions asked were: whether you recognize a difference between infectious states following abortion and those following full term delivery: in uterine infections, whether your treatment is conservative or operative, and, if the latter, whether you practice digital or instrumental curettage and at what period; whether you make

use of a pack in cases of incomplete abortion showing evidences of infection; whether for differential diagnosis, you consider it necessary to make routine, bacteriological examination of the lochia. To present date, and to my knowledge, there has not been published a resume of the answers received, nor a brief as to the opinions reached by the commission. Such a publication would be a most valuable one by way of simplification of the subject.

That it was thought advisable to institute such an investigation speaks for the wide latitude which unquestionably exists among physicians today, in the recognition and management of these cases. My present discussion is based upon the principles which observation and experience have taught me to look upon as the most practical, and as those capable of yielding the best results.

There is no question but that any consideration of our subject should begin with the absolute dictum that "fever" in the puerperium bespeaks sepsis: an infection present in the birth canal or adjacent organs or tissues, of some type, the location and especial nature of which, it is our immediate duty to determine. With due regard given to this law, we are in a position, by way of a practical consideration to grant that this elevation of temperature may be of non-infectious or infectious origin; the former, however, to be thought of only after complete and thorough observation and examination of our case have eliminated every one and all of the numerous types of the latter.

Allow me, first, to consider the so-called non-septic etiological factors for temperature elevation following childbirth. I would recall for you, first, the frequency of elevation during the first 24 hours after birth, especially marked in cases of protracted, difficult labor, operative cases, after intra-uterine manipulations have been practised, and where there has been excessive loss of blood. It is transient only: by the expiration of the first day, the temperature should be normal, or at least, showing a well marked recession. Again, a chill, in association with labor or immediately following, is to be looked upon as physiological, or reactionary,—unless, there is the history of labor for a prolonged period, or premature rupture of membranes with frequent internal manipulations, and concomitantly, there occurs a sharp rise in temperature. Again, not infrequently, with the establishment of the milk, where the breasts

become markedly engorged, distended, painful, and especially, in the neurotic, sensitive patient, there will be a temperature elevation. Not a "milk fever," please, gentlemen: but a transient, noninfectious, rise which quickly subsides within the period of twenty-four hours.

During the period in which the woman is in bed, when there are occurring rapid and marked metabolic alterations, in association with the involutionary changes, we must allow for a certain physiological fluctuation in temperature. In my own clinic the upper limit for this is placed at 99 2-5—evening rise; other clinics consider all elevations to 100,—as within this range. The young mother can be easily excited by a fretful baby, by the baby which must be coaxed to nurse; by too many visitors, and by other seeming trifles giving rise to various neuroses capable of producing marked deviation from a normal temperature curve. A "neurotic fever," then, if you please; but mark you, only to be diagnosed or even thought of, when all other possible and pathological factors have been positively excluded.

Inter-current diseases, may account for temperature abnormality in the puerperium. For example, any of the so-called "acute infectious" diseases, malaria, tuberculosis, etc., likewise, infections of the urinary tract, which, properly considered, are not to be classified with true puerperal infections. These conditions can be recognized by their characteristic symptomatology and physical findings plus laboratory means of diagnosis. I would caution you again, however, that before such factors are sought for, a thorough examination to eliminate all forms of puerperal infections must be made.

In all of the clinical forms of infections in the puerperium, with the exception of one, the so-called "Sapraemia," we have to deal with some bacterial invasion, with the results of the activity of pyogenic organisms. The infection may be of the single or mixed type: usually the latter. The infecting organism or organisms, may be introduced into the generative tract from without, the hetero-genetic infection; or from an infectious process elsewhere, the agent or agents being carried to the birth canal by the blood stream, the haemolygenetic; or, according to some clinicians, there may occur an "auto-infection."

Without a doubt, in the vast majority of cases of sepsis, the origin is heterogenetic. Likewise, the attending physicians

must stand ready to assume the blame unless their supervision and technique in management of all cases are such as to be above reproach. Perfect technique, in obstetrical practice, outside of hospital environments, I grant you, is frequently difficult to carry out and to observe; nevertheless, no matter what may be the surroundings of these cases, the physicians who are conscientiously careful, who do not practise meddlesome midwifery, who limit the frequency of internal examinations and who give proper attention to hand disinfection, will minimize the possibilities of the introduction of infecting agents into the birth canal. It has been my observation that imperfections in technique are most prone to occur in cases of protracted labor, and in the conduct of the ordinary management of the third stage. In the latter, have I seen most startling liberties taken with asepsis and antisepsis; but little thought or heed being given, for example, to proper hand cleansing, even though the hand is to come directly in contact with the numerous areas of abrasion and lacerations about the lower birth canal. Constant alertness to a proper, careful technique on the part of the attendant means everything in the way of prophylaxis against puerperal septic states.

Next to the physician, the two most fruitful and likely sources of infection, are the nurse and the use of vulvar pads improperly sterilized. The nurse, in her constant contact with the patient after delivery, is a constant source of danger; and it stands to reason that she must be as skilled and as conscientious in technique as the physician. The so-called practical nurse is a menace that is awful to contemplate, and if patients could only know and realize the dangers to which they are subjected, in the hands of these ignorant caretakers, those who could not afford the attention of a regularly trained nurse would surely take advantage of the manifold benefits of our modern hospitals. As to the vulvar pads, the use of those not sterilized is a practise which is to be most heartily condemned, especially, in view of the fact that such pads sterilized, in individual packages, are upon the market the country over.

Just a word upon the question of "Auto-infection." Recall with me, if you will, that the generative tract of the perfectly normal, healthy woman is to be considered free of all active bacteria; that the external genitalia are the seats of various and numerous forms of active organisms similar to the entire skin surface of the body, but, to their entrance into the internal

genitalia, nature has provided certain barriers. From the vaginal flora, there can be recovered different forms of micro-organisms, but these are found to be absolutely innocuous; they cannot be grown upon cultures nor can they give positive injection reactions. The vaginal secretion, of acid reaction and containing the bacillus of Doerderlein, is claimed to be a germicide, which destroys the activity of any bacteria gaining access. The cervix and uterine cavity are absolutely free of any organism, active or inactive. With these conditions in mind, supposing a case, in which no internal manipulations of any nature have been practiced, shows an unquestionable type of infection. Such cases are on record. Is it an instance of auto-infection. Those in favor of this origin point to experimentations showing that the innocuous vaginal organisms are capable of re-awakened activity. For example, vaginal secretion injected into the ear of the healthy rabbit shows no reaction; when the ear is constricted for a given period, this same secretion will give a positive reaction. By analogy, they claim, that, in the presence of the numerous areas of abrasion, lacerations, the presence of blood clots, all acting as excellent culture media, these ordinarily dead micro-organisms, take on activity and thus, give rise to some type of puerperal sepsis. Hence, auto-infection. We must admit the possibility of this source, more especially because of the isolation of pure strains of the Colon bacillus in certain cases, rather than because of the experimentations quoted. Personally, however, I believe, only in the possibility and not the probability of auto-infection; and likewise, that if careful examination were made in most instances cited, I believe an old, latent gonococcic infection would be found. And, right here I would state that the gonococcus can and does remain quiescent in the generative tract of the woman for years, with no clinical evidences of its presence in a certain proportion of cases; also, that there is no condition which can occur in the female genitalia more likely or capable of awakening these dormant cocci into marked and virulent activity than that found therein, following childbirth.

For a purely practical consideration, I will make no distinction between the septic states developing in connection with abortion and miscarriage and those appearing in cases delivered at term. The possible organisms are identical; the status of the parturient tract is identical, and the clinical pictures of the various types of sepsis are the same.

I believe a proper classification of the clinical forms of puerperal infections is an aid in diagnosis. Upon practical grounds only, I am accustomed to speak of the "early" and "late" forms of sepsis, including among the former those which usually manifest themselves about the third day after delivery, and among the latter, those which usually appear at the end of the first week or later.

Under early infections, we recognize local and general forms. Local forms would include the pseudo-diphtheretic infections of the perineum, vagina, cervix (puerperal ulcerations); and the intra-uterine septic states, namely: "Sapæremia," acute putrid endometritis and acute septic endometritis.

The general forms would include the acute septic intoxication (Septicæmia or Bacteræmia) and the Pyæmic state.

Under the late infections, I would include,—infections of the breast, acute adnexal inflammations (or acute exacerbations of a previous salpingitis or oophoritis); acute parametritis or acute pelveo-peritonitis; phlebitis of the uterus, pampiniform plexus or femoral vein (Phlegmasia alba dolens); general peritonitis. I would emphasize again, that this classification is not based upon any dogmatic, or fixed rules; inasmuch as, at times, those infections usually appearing early, may appear late; and vice versa.

The most frequent symptom occurring, and the one which physicians constantly look for as the one designating infection in a case, is the offensive, pathological odor of the lochia appearing on or about the third day of the puerperium. With the odor, the lochia becomes, characteristically, dark, brown-muddy, frothy in appearance; and usually associated, sooner or later, will occur elevation of temperature and general toxic symptoms. With this picture, physicians almost invariably become alarmed; they jump to a hasty conclusion of an intra-uterine infection and direct heroic measures immediately to the cavity of this organ. There may be of course a uterine sepsis present, gentlemen; but please, I ask you, to remember this one caution, namely; never diagnose an intra-uterine infection with these symptoms, never manipulate in the cavity of the uterus, until, by abdominal palpation and thorough examination of the lower birth canal, you are in a position to make a positive diagnosis that you are dealing with an intra-uterine septic state. All the local infections of the lower birth canal give rise to the same clinical picture. Where odor to

the lochia and general symptoms are depended upon local states, abdominal palpation will show a normally involuted, non-tender uterus, and inspection of the lower tract will show the point and areas upon which there has developed a dirty, yellowish, sloughing membrane, and from which there occurs a decidedly putrid odor. A lacerated perineum, one in which the sutures have sloughed, will give rise to this picture; especially, would I direct your attention to the frequency with which we find this characteristic, pseudo-diphtheretic infection about the cervix. This latter is a purely local infection, identical, in the picture to intra-uterine sepsis; general toxic symptoms, in some instances, are marked; its diagnosis is easy, when we find normal involution of the uterus, and see the cervical membrane through the speculum. So frequent do I find this clinical entity, that inspection of the cervix is a routine practice in all cases of offensive lochia, no matter how characteristic the picture of the case may be of one of intra-uterine infection. Furthermore, in therapy, if we are dealing with a cervical infection, and we, blindly, resort to intra-uterine douching, we will quickly spread infection to the cavity of the uterus, thus increasing the chances of general sepsis in our patients. The ideal therapy, is the topical applications of iodine tincture through the speculum, together with frequent, vaginal douches. With the disappearance of the membrane, in a few days, the patient returns to a normal puerperal state.

A pure Sapræmia, is a rare obstetrical finding. It is observed where there is something retained in the uterine cavity which undergoes necrosis and sloughing, from which general symptoms arise by the absorption of toxins and ptomaines. It is a local condition, a putrefactive state only. It is met with most frequently, in cases of incomplete abortion and miscarriage. Its prominent clinical symptom is a foul lochia. Internal examination reveals a large, boggy, non-tender uterus, a patulous cervical canal, and in the cavity of the uterus, a variable quantity of organized blood and necrotic material. Careful and immediate removal of the contents of the uterus quickly controls the symptoms.

Most cases diagnosed Sapræmia, are in reality, instances of acute putrid endometritis; in other words, upon the basis of the retained necrotic masses there occurs a true infection. The clinical picture of the two is quite similar; except that in the latter, there is the association of acute inflammation, hence

exaggeration of symptoms will be noted. There is the tendency for an initial chill, higher temperature curve, pelvic pain and tenderness, plus the foul and muddy lochia. Histologically, we see nature attempting to wall off this acute infection in the uterine cavity by a distinct layer of leucocytes; hence, this acute infectious process tends to remain localized to the cavity. In the therapy, then, our intra-uterine manipulations must be of such a character as not to cause the penetration of the organisms present through and beyond this wall of infiltration. I believe a digital curettage should be insisted upon to remove the necrotic material and not an instrumental operation; I believe intra-uterine irrigations following curettage should be infrequent; not more frequent than once daily and even this much will be too frequent in a great many cases. It has been my experience, that after curettage, the less intra-uterine treatment is practiced, the quicker the patient returns to normal. I believe in the administration of ergot, to induce tetanic contraction, following curettage; this as a prophylaxis against general post-operative spread of infectious material or micro-organisms.

The most virulent and rapidly spreading type of uterine infection is the "Acute septic endometritis," the type wherein we find no tendency to localization to the cavity, and upon which almost invariably we find occurring a general sepsis (Septicæmia or Bacteræmia). It is usually a streptococcic infection—uterine symptoms may be pronounced or, so quick may the invasion be that the local symptoms are masked by the aggravated general condition. Clinically, on or about the third day, we have the sharp chill, the high septic temperature curve oncoming, the markedly increased pulse; sharp pain in the pelvis and lower abdomen, with extreme tenderness; the uterus well contracted, exquisitely tender and the lochia either ceased entirely or decidedly diminished. Adjacent organs and tissues are quickly involved, giving rather a complex and severe type of clinical picture. Because of rapid spread and invasion, I can see absolutely no advantage, and on the other hand rather serious harm, accruing from curettage in this form of sepsis. I believe in leaving the cavity of the uterus severely alone; intra-uterine douches can accomplish nothing except in the later stage of some few cases, where there occurs a profuse, purulent discharge from the cavity. This type of

infection calls for frequent, hot, vaginal douches, ice-bag and general eliminative and supportive measures.

Where there occurs the general sepsis (*Septicæmia* or acute *Bacteræmia*), no matter from what previous type of infection, the patient presents a severe and marked general, toxic picture; repeated irregular chills, high temperature, pulse rapid and weak, pinched, drawn facies, restlessness and oncoming stupor. Associated, will there be groups of symptoms depending upon metastatic, septic processes, for example; septic pneumonia, septic endocarditis, hepatic abscess, local or general peritonitis. It is in this state where we find distinct blood changes—a marked, polynuclear leukocytosis, rapid destruction of the red, blood cells (hence early jaundice), and a tendency to the disappearance of the eosinophiles. Blood cultures should recover the invading type or types of organisms.

Necessarily, the therapy must be along general lines,—elimination and support. I believe in a most generous diet (except in cases of peritonitis); free catharsis; free kidney and skin activity. To promote the latter, enteroclysis is most useful, together with tepid water or alcohol sponge baths. For stimulation, alcohol is the best; in fact, the free, internal administration of alcohol is always an excellent practice. The properly selected remedy has a most wonderful field in this class of cases. Among special therapeutic measures, the vaccines are most efficacious; anti-streptococcus serum may be useful; also, the internal administration of carbolic acid (5 to 20 per cent.).

Of the late forms of puerperal sepsis enumerated, I would ask your attention, briefly to phlebitis. Puerperal phlebitis may be localized to the uterus, to the broad ligaments, or to the lower extremities. Of the three locations, that of the limbs, (the *phlegmasia alba dolens* or “milk leg”) is the most common.

Pelvic phlebitis, that of uterus and the broad ligaments (pan-piniiform plexus), is to be considered of septic origin. Most of these cases are secondary to some septic condition previously manifested, either in uterus or adjacent parts. Likewise, from the practical viewpoint, differential diagnosis of a pelvic phlebitis from an acute or sub-acute inflammation of the parametrium or adnexa is a matter of extreme difficulty. In these cases, we can, however, definitely state that the focal point of infection is pelvic, and is localized to one or both sides of the

uterus (extra uterine). Our treatment should always be purely conservative; the same as for any acute pelvic inflammatory condition. I do not believe in any attempt to respect the involved veins, even where a positive diagnosis of a phlebitis can be made.

Phlegmasia Alba Dolens, offers an easy diagnosis. It is a septic thrombo-phlebitis in the vast majority of cases; its treatment should be conservative only. Let me add the caution, to insist upon absolute rest of the limb at least for a period of one week following the return of the temperature to normal. The œdema, of course, may persist for an indefinite time.

In conclusion, I would suggest the possibility of a pelvic abscess, as a late sequence of any of the types of pelvic infections. The abscess may be a suppurative parametritis or a suppurative perimetritis (or pelvic peritonitis). By way of diagnosis, in the former, be it remembered, that the suppuration is extra-peritoneal and usually lies to one side of the uterus, between the folds of the broad ligament. Hence, we will find "pointing" in the lateral vaginal fornix, the uterus being displaced to the opposite side. In the latter, the abscess is intra-peritoneal, a localized, suppurative pelvic-peritonitis, walled off by adhesions from the general peritoneal cavity. This is a sequence to an infection involving the tubes or may arise directly from the uterus by continuity of structure, or by lymphatics, "Pointing," in this instance, will take place in the posterior culdesac, the uterus, thus, being displaced upward and well anteriorly. In both instances, when suppuration, is diagnosed, vaginal puncture is the ideal therapy for the immediate control of the manifestations of a septic process.

THE EFFECT UPON THE GENITALS OF EXTIRPATING THE ADRENALS.—Novak (Vienna) has contributed to our knowledge of the ductless glands by a series of experiments in which he extirpated the suprarenal capsules in rats. From these experiments he found that extirpation of the adrenals in rats induces a hypoplasia or atrophy of the genitals, which is the more pronounced the younger the animal operated. Partial removal does not produce this result. This genital atrophy is especially pronounced in animals in whom artificial adrenal tumors were caused. It does not occur in consequence of impaired nutrition but depends upon the removal of the function of a specific internal secretion. The procreative powers of such animals is materially diminished. If pregnancy exists it is not interfered with by extirpation. The rather scanty clinical observations heretofore made are in accord with these observations.

RECOGNITION AND TREATMENT OF FRACTURE OF THE FEMORAL NECK.

BY

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WITHIN the past few years I have seen five cases of ununited fracture of the femoral neck following the failure to recognize the condition until too late.

This fracture occurs most frequently in the aged, but we must also keep in mind that at times it is found in the young and in middle age. I have recently seen such a fracture in a girl of fifteen years; an impacted fracture of the femoral neck. The patient, a girl, tripped over a box in such a way as to bring about a leverage force and then fell directly on the hip. The fracture was not recognized but was treated as a sprain. After a time of misguided treatment, she began to limp about and four months afterwards came to me for the resultant deformity. The leg was one and one-half inches short and very much everted. This was so marked that she walked with difficulty. A radiograph showed the line of fracture and an upward displacement of the trochanter, the outer fragment was jammed backward and the line of the femoral neck was slightly below a right angle. This patient was operated on by me for the correction of the deformity. The line of fracture was found and chiseled through, the leg extended and internally rotated and the fragments fixed in this corrected position by a nail driven through the trochanter.

In a patient with an injury about the hip, a very good plan to follow, especially so in the aged, is to consider that there is a fracture until the contrary can be proven. The force of the injury may vary from a severe fall of many feet to a mere tripping when walking or getting out of bed. An instance of a severe injury was one in a man fifty years old who fell ten feet directly on the hip joint. The fracture was impacted associated with slight eversion of the leg, with very little shortening.

In another patient, a very slight force caused a complete fracture in an elderly woman. She was arranging her hair

at a mirror when she turned suddenly, lost her balance and fell to the floor. The neck of the femur was fractured completely and there was marked shortening and eversion of the limb, with complete inability to bear weight upon it.

Fortunately, most of these fractures are impacted and if treated carefully will do well. Whether it is intracapsular or extracapsular does not make much difference in the result, but in the complete fracture the intracapsular is the one in which we are more likely to have non-union, either due to nutritional changes or to the influence of the synovial fluid on callus formation.

Very significant is the position of the leg at the examination; it will nearly always be everted, more rarely inverted and these positions cannot be changed voluntarily by the patient. The shortening is, as a rule, much less when there is impaction and the trochanter will be a little more prominent and will often be a little back of its normal position.

In making use of the anterior iliac spine for measuring the length of the leg it is some times difficult, especially in stout patients, to find the exact tip and an error of one-half to three-quarters of an inch is an important mistake. This can be avoided by locating a little depression just under the tip of the anterior iliac spine, which can always be outlined. It is where the sartorius muscle has its origin. By hooking the tape here and hugging the upper part you have a definite point for your measurements. To obtain the displacement of the trochanter, a simple and efficient method is to draw a transverse line from the tip of the trochanter to the anterior part of the thigh and then take the distance from the anterior iliac spine to this line. The difference between the two sides represents the amount of shortening. While looking for shortening, if a complete fracture is suspected a little steady traction will lengthen the leg and make the diagnosis clearer. This should be done very gently, for if there is an impaction it must not be broken up, especially in patients of middle or old age.

Keeping in mind the likelihood of a fracture about the hip in the aged, we are pretty safe in making such a diagnosis if we have a history of falling and find the leg everted, which cannot be corrected voluntarily, a certain amount of shortening varying from one-half to two inches, the ilio tibial band relaxed and the fossa just behind the trochanter obliterated; bearing in mind that the more eversion and the more shortening, the

greater the probability that the fracture is complete. Whenever it is possible, a radiograph should be made to corroborate the findings.

The golden rule of treatment is to be gentle in our manipulations. In the impacted fracture the best plan is to place the patient on a firm mattress, with a board underneath, and put sand bags to the side of the body and leg to steady the joint. These bags can be placed so that the lower one tends to gently rotate the leg inward, while a bag on the inner side holds the leg slightly abducted. A soft pillow should be placed under the knee and a comfortable pad made for the heel. A long splint can also be used, extending from the axilla to below the foot.

It is in complete fractures that non-union occurs, although a few cases have been reported where absorption of the neck in an impacted fracture has taken place, due, no doubt, to the interference with the vascular supply. When the fracture is complete, abduction of the leg brings the fragments close together and traction should be employed.

In operating upon a case of non-union of the femoral neck recently, I took the opportunity to note the positions of the fragments under manipulation of the limb and found that abduction and internal rotation brought the parts into the best apposition. We made use of this knowledge in the treatment of a patient last summer. She was placed on a splint which held both legs abducted and traction was made on the injured side while straps held the leg slightly rotated inward.

In suitable cases, especially in the young, a plaster of paris cast may be used. The leg should be abducted about forty degrees. The cast is applied while an assistant makes steady traction and abduction.

The Thomas metal splint can be used with advantage in some cases. It extends from the chest to the middle of the calf, passing down the back of the thigh. Transverse bands and straps hold the splint snugly to the body and leg. It is especially useful in the cases that must not be kept for any length of time in bed, or who for any reason must be moved often.

As the fracture occurs most frequently in the aged, we must consider the complications arising from keeping such patients in bed for any considerable time. In some extreme cases we may even have to neglect the fracture to preserve the patient,

but, as a rule, with care as to proper mattress and attention to the skin and avoidance of pressure, the great majority may be safely tided through. The patient should be bolstered up slightly at once to avoid hypostatic congestion of the lungs, and in a couple of weeks can be put in a semi-sitting position. The traction, when used, can be discarded in about four weeks and at six or eight weeks the patient can be gently moved from one place to another and, a little later, put in a chair with a board for the injured leg. No weight should be put on the affected limb for at least three months, and then gently with the use of a cane. Often when the patient first gets around the knee will be found to be slightly stiff and a little painful. Massage will help this if carried out gently during the course of the treatment, and a little general massage is a great aid in keeping the general physical condition good.

A word about the transportation of the patient to the hospital, if it should be desired. Unless there is some protection a complete fracture will give a good deal of pain, and if the fracture is impacted, it should not be broken up. A good method is to place a long splint, about six inches wide, from the axilla to below the foot. It should be well padded about the hip and ankle to prevent pressure and also in the hollow spaces about the waist, the thigh and leg. A broad swathe should be fastened snugly about the body and the splint below the hip strapped or bandaged firmly to the leg.

The operative treatment should be reserved for cases of non-union which are good surgical risks. The results in these cases have been very good and if the operation is performed in a well equipped hospital the danger of infection is very slight.

OBSTETRICAL INJURIES OF THE EYE.—The author reports two cases of forceps delivery complicated with ocular traumatism. In one, the usual linear corneal opacity resulted. In the other, luxation of the globe occurred during delivery. The luxation was reduced by the attending obstetrician and a compress bandage applied. On removing the bandage the next day the luxation had recurred. The conjunctiva in the lower cul-de-sac was torn. Enucleation three days later because of purulent keratitis. Examination showed the optic nerve severed and all the external muscles torn across, excepting the superior rectus and the superior oblique.—*Krauss in Annals of Ophthal.*

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**BUREAU OF OPHTHALMOLOGY, OTOTOLOGY
AND LARYNGOLOGY**

BASAL FRACTURES INVOLVING THE INNER EAR. REPORT OF A CASE.

BY

DR. G. W. MACKENZIE.

IN looking over the many text books on General Surgery one is impressed with the lack of information offered on this subject as compared with the comprehensive manner in which it is treated in the standard works on Otology, notably, those of Politzer and Bezold.

Concerning the differential diagnosis between fractures of the base involving the inner ear and those involving the middle ear or both combined, the works on General Surgery contain practically nothing: nor, do they describe the most satisfactory method of operation.

From the standpoint of frequency, fractures of the base involving the inner ear is an important subject. Bezold found from a large statistical examination in the Zurich clinic, that one-fourth of the cases of basal fractures show also involvement of the inner ear. From the standpoint of diagnosis, the subject is no less important, for a mistake in diagnosis is liable to lead to unnecessary deafness on the one hand or the loss of life on the other. For instance: if we should accept the general surgeon's interpretation of temporal bone fractures and operate accordingly we might sacrifice the inner ear in cases where the middle ear is involved and the inner ear has escaped and thereby precipitate deafness, or make the still graver mistake of operating the middle ear alone when the inner ear is involved, with fatal results from subsequent labyrinth suppuration and meningitis.

For these reasons and, too, because of the additional light thrown upon the subject during the last 7 or 8 years, by the workers in Otology, I feel warranted in presenting the subject

at this time with the report of a case in detail. While the majority of basal fractures involving the temporal bone are bilateral, according to Bezold, the case I am about to report is unilateral and typical of its kind.

THE CASE.

Geo. D., colored laborer, 25 years, admitted to the accident ward of the West Phila. Gen. Hosp., Nov. 7th, 1913.

History: The patient was hit on the back of the head directly behind the right ear, with a shovel at the hands of a fellow laborer. Though felled by the blow, he did not lose consciousness. One hour later he was brought to the hospital in a police patrol wagon. With the assistance of two officers, one on each side, he was able to walk the few steps from the patrol wagon to the receiving ward.

Examination by the resident revealed no abrasion or appreciable swelling at the site of the injury; however, there was a profuse flow of blood-tinged fluid from the right ear which seemed to demand the resident's immediate attention. He found the flow difficult to control in spite of the use of a cotton tampon saturated with adrenalin, tightly packed into the external canal. An ice cap was applied to the head. He then ascertained the following symptoms: Stopped-up feeling in the right ear with impairment of hearing but not complete deafness. Dizziness, which the patient described as a staggering feeling: occasional vomiting, weakness, pain behind the right ear and headache. He was placed in charge of Dr. C. H. Harvey, then on duty in the Surgical department, who treated the case expectantly and by him was referred to the Otological department eleven days later.

A history taken at this time revealed in addition to the above facts—That the patient had been dizzy for several days after admission to the hospital, that his headache had become more intense from the first day, that his deafness increased in intensity, so too the pain behind the ear. On the second day the cotton tampon was removed by Dr. Esposito, the resident physician, when there was a recurrence of severe oozing of bloody fluid. A fresh tampon was applied. On the fourth day the discharge from the ear became purulent and offensive. There was a gradual rise in temperature from 97.8 on the first day to 102 on the afternoon of the sixth day with average morning fall and evening rise.

A functional hearing examination led me into sufficient doubt, as to the possibility of some remains of hearing, that operation was temporarily deferred. I had Dr. Alexander make a separate examination the following day which resulted in the same doubt. In the meantime the ear was treated after the routine method of cleansing, hydrogen peroxide and gauze drainage. Since the patient's general condition was not alarming at this time and his temperature had reached normal, he was otherwise treated expectantly. The ear condition, however, grew steadily worse, the discharge became more profuse and offensive, the swelling over the mastoid steadily increased until November 21st, when his temperature, after having remained normal for some time, rose to 100 and all symptoms of mastoid involvement became so pronounced that further delay was inadvisable and accordingly the patient was prepared for operation. Before operating, a third functional examination of the ears was made which resulted in the same findings, but with less doubt, as the original examination, to wit; complete deafness and loss of static function, proving that the inner ear was completely destroyed, the knowledge of which was absolutely necessary before attempting the operation.

Complete functional hearing and static tests, made Nov. 22nd, a short time before operating, were as follows:

Right Ear		Left Ear
1 Meter	Conversation Voice	12 Meters
O	Whispered Voice	7 "
O	Acumeter	12 " +
	Weber	————>
— 20"	Rinne'	+
Short	Schwabach	slightly short
O	C ₁	normal
very short	C ₄	normal

Stenger's test with small a' forks showed deafness on the right side.

3 meter speaking tube, conversational voice, 90 per cent. failures. Whispered voice nil.

White's noise producing apparatus indicated complete deafness on the right side.

When looking straight ahead, nystagmus to the left at quick intervals with very short excursions.

When looking to the extreme left, horizontal combined with slightly rotatory nystagmus to the left, of wide excursions and at close intervals.

When looking to the extreme right, fairly pronounced horizontal nystagmus to the right, but less pronounced than to the left.

Otoscopic findings: Right ear—profuse, thick, purulent, non-offensive secretion, under pressure, and pulsating. The upper wall of the canal sags, making a narrowed canal, merely a fissure with the long axis from above and in front to downward and backward. Anatomical details of the deeper structures impossible to see because of the swelling of the canal. No tenderness on mastoid to pressure except at the tip, posteriorly. Periosteum less movable and thickened on the affected than on the non-affected side. Right ear stands out more than the left and the retro-auricular fold is obliterated.

Left ear: findings are negative.

Further examination reveals facial paralysis in all branches: the patient cannot corrugate the brow. He closes the lids incompletely and cannot whistle or elevate the upper lip on the right side.

Eyes: with moderate illumination the pupils are unequal in size, the right being larger than the left, both however react promptly to light but the right pupil still remains larger than the left. Aside from nystagmic jerking the eyes moved well and together in all directions. Convergence good.

Operation: Nov. 22nd, 1913, 6.20 P. M., 2 hours duration. Operation was considered in the afternoon after a report by Dr. Alexander that the patient's condition had grown worse since the day before, rise of temperature to 99.6, increased pain in and about the ear and tenderness over the mastoid, also swelling over the mastoid, increased narrowing of the external canal. My examination confirmed the findings of Dr. Alexander, noted immediately above. Speaking tube at right ear and noise producing apparatus at the left the patient could not hear the loudest conversation voice. After cessation of noise in the left ear with tube still in the right ear the patient heard *loud* conversation voice without failure. Spontaneous nystagmus absent when looking straight ahead, however; there was a greater degree of nystagmus to the left when looking to the left than to the right when looking to the right. Temperature 100 degrees. With these findings, and seeing the patient's

condition was worse, it was decided to proceed immediately to do a radical mastoid operation plus a labyrinth exenteration, together with exposure and inspection of the dura of both fossae. The patient was etherized by Dr. Vedder, the regular hospital anæsthetist on duty. Operation was performed as follows:

A typical retro-auricular incision over the mastoid, about 4 cm long and about 1 cm behind the retro-auricular fold, through the skin and soft parts and periosteum to the bone. Separation of the periosteum with large raspatorium posteriorly and anteriorly to the external canal. Because of the limited amount of space the incision was enlarged both upward and downward; when, further separation of the periosteum became easier. A fracture line was noted running from the linea temporalis, about 3 cm posteriorly to the canal down to the suprameatic spine and thence along the upper posterior wall of the canal, indicating a fracture of the base of the skull extending through the temporal bone. With a narrow raspatorium the soft parts were separated from the osseous canal along the superior, posterior and inferior wall throughout its entire length. The soft parts were found to be markedly thickened from inflammatory œdema. With a chisel, the mastoid was opened about 1 cm behind the posterior wall of the canal. Immediately under the cortical layer the sinus was located and bared and found to be in normal condition. Further chiseling, first with a No. 10 then a No. 7 Alexander chisel, located the mastoid antrum. It was found to contain a moderate amount of pus and granulations. Further opening of the mastoid showed the lower cells, particularly, to contain a quantity of pus, some of which was saved for microscopic examination. The posterior wall of the canal was found fractured to the tympanic cavity, and thence along the tegmen in a posterior and median direction over the aditus and there diverging in three directions to the posterior surface of the petrous bone, leaving a somewhat pyramidal shaped, perhaps better described as wedge shaped, fragment of bone completely separated from the main body. This fragment included a part of the posterior surface of the petrous bone near to and including the posterior lip of the internal canal, and a portion of the groove above for the accommodation of the petrosinus. This fragment was keyed in and difficult to remove. The line of the fracture accounted for the facial paralysis.

The posterior wall of the canal was removed, leaving the facial spur intact. The last bridge of bone between the antrum opening and the middle ear cavity was removed; then curettage of the middle ear contents with removal of the ossicles; the Eustachian tube was filed. The inner extremity of the inferior wall of the canal was lowered to the level of the hypotympanum with a No. 5 chisel. The upper half of the external crus of the external canal was removed exposing the lumen of the canal. The solid angle of the three canals was next attacked. The superior canal was then removed together with the eminentia arcuata, which included a goodly portion of the superior canal. The extremities of the posterior canal were removed and a large opening posteriorly was made into the vestibule into which a probe passed readily. Anterior to the facial spur the stapes was removed. The promontory was opened with a No. 5 chisel and a small curette. The openings into the middle and posterior skull fossae were enlarged liberally. The middle skull fossa was searched for possible clot but it was not found. Plastic was made after Panse. Wound was dressed with wet iodoform gauze, over which was applied dry gauze and bandage. Patient was put to bed and condition pronounced good.

Nov. 23, 13. Patient resting comfortably. Facial paralysis more pronounced this A. M. than before operation. Nystagmus not changed since operation and no more vertigo than before. Complains of pain in right side of head and back of ear; later in the day he complained of headache over right eye. Right pupil slightly larger than the left; however both react promptly; highest temperature 6.30 P. M. 102.4 degrees, pulse 88, resp. 20.

Nov. 24, 13. Complains of headache, especially over right side of face and eye. Right side of face and neck slightly swollen. Redressing by Dr. Alexander when the patient had a slight convulsion. Awakens with a start. Highest temperature 3 P. M. 104.6 degrees, pulse 106, resp. 28.

Nov. 25, 13. Patient seems somewhat brighter than yesterday. Mixed Phylacogen, 5cc given hypodermatically at 9.15 P. M., after which patient slept two hours. Highest temperature at midnight 104 degrees, pulse 120, resp. 24. Wound redressed.

Nov. 26, 13. Complains of frontal headache. Right side of face and neck still swollen, complains of fullness in stomach

in spite of small amount of nourishment taken and is very restless. Mixed Phylacogen 10cc given 11 A. M. Highest temperature 103.4 degrees, pulse 108, resp. 28. Wound redressed.

Nov. 27, 13. Complains of severe pain in right ear. Redressing of wound. Delirious a good part of the day. Picking at bedclothes. All symptoms somewhat improved in the P. M. as compared with the A. M. Patient does not seem to recognize the nurse and physicians. Highest axillary temperature 8.55 P. M. 102 degrees, pulse 106, resp. 26. Wound redressed.

Nov. 28, 13. Resting more quietly this A. M., later became more restless. Complains of pain in head over entire right side. Delirium quite continuous throughout the day but less noisy in the P. M. than the A. M. During more rational moments patient complains of stiffness throughout the body and it was first noted that the patient could not use the left side of his body for about one hour. Complains of soreness and stiffness in the back of his neck, also pain in the lumbar region. Sensitive to the slightest light. Highest axillary temperature 6 P. M. 103.6 degrees, pulse 80, resp. 24. Wound redressed.

Nov. 29, 13. Patient sleeps better, had generally less delirium but for a short time about noon when he was highly so. Temperature, pulse and resp. about the same as yesterday. Wound redressed.

Nov. 30, 13. Patient cannot use left arm at all and left leg but poorly. Delirium generally lighter than it had been. Complains of soreness on right side of head but less than before. Highest axillary temperature 101.4 degrees, pulse 80, resp. 24. Wound redressed.

Dec. 1, 13. Sleeps for longer periods. Complains of right arm feeling numb and is unable to use it. Highest axillary temperature 100.6 degrees, pulse 80, resp. 20. Wound redressed and shows healthy granulations. Phylacogen 5 cc.

Dec. 2, 13. Patient is generally improved, in fact feels quite comfortable, sleeps more, has no delirium, is still weak and clumsy in the left arm and left leg. Highest axillary temperature 99 degrees, pulse 88, resp. 22. Wound redressed and granulating favorably.

Dec. 3, 13. Restless for a short time but otherwise slept considerably but was not comatose at any time. When asked he said he felt quite comfortable. Can use left arm and leg more than for several days past. Highest axillary temperature

98 degrees, pulse 78, resp. 20. Wound redressed and looks well.

From Dec. 4, 13. Temperature, resp. and pulse remained quite normal, with the exception of the pulse which ranged about 80. Wound was redressed regularly every day. Patient felt comfortable and slept well at nights and was allowed out of bed to go to the toilet, on Dec. 9th, 13, after which he was allowed out of bed at will. From this time on recovery was uneventful.

Jan. 23, 14. Functional examination resulted in the following finding:

Right ear		Left ear
	Conv. speech	8 M.+
O	Whisp. "	4 M.
O	Acum.	6 M.+
<hr/>		
sh. 23"	Weber	—> L.
—	Schwab.	sh. 11 "
	Rinne	+
<hr/>		
not heard	C1	Norm.
short	c4	Norm.

Slight suggestion of rotary nystagmus when looking straight ahead.

Horizontal nystagmus to right when looking to right.

Horizontal nystagmus to left when looking to left, but to the left more than to the right.

Turning Tests. After ten turns to the left with head erect horizontal nystagmus to the right 8". After ten turns to the right with head erect horizontal nystagmus to the left 18". After fifteen turns to the right, with head erect, horizontal nystagmus to the left lasting 27". After fifteen turns to the left with head erect, horizontal nystagmus to the right lasting 9".

Caloric reaction of the right ear negative.

The patient was then put in charge of Dr. G. J. Alexander, who ably looked after the further treatment. Healing of the retroauricular wound was complete about the middle of March and all discharge from the ear ceased about the latter part of May.

August 24, 1914, patient was again examined by the writer with the following results:

Right ear		Left ear
8 M +	Conver. Speech	8 M +
Ad. Conch	Whisp. Speech	4 M
.5 M	Acumeter	6 M +
<hr/>		
	Weber —>	sh 2" or 3"
short 13"	Schwab.	sh 2" (?)
no air cond.	—Rinne	+ 28", 28"
<hr/>		
	II O C ₁	sh 15"
(from other side)	Short c ₁	sh 5"
very short (?)	Air	sh 12"

The remedies used were Belladonna early in the case before and immediately after operation; apis especially during the period of delirium. Urotropin was used in 5 grain doses every 3 hours for two or three days during the period when the temperature was particularly high, and mixed Phylacogen at odd times. Sulphur 12x was administered at wide intervals for a period of a few weeks after the temperature reached normal. It is my impression that the remedies administered aided materially in the recovery of the patient. Although every detail is not reported I have attempted to glean from the records what appeared to be the most important facts of the case.

DISCUSSION OF THE CASE.

In reviewing the symptoms after the injury we find mentioned impairment of hearing, which subsequently proved to be deafness, vertigo, vomiting, general weakness, inability to walk, indicating equilibrium disturbance, headache, spontaneous nystagmus to the unaffected side, escape of cerebro-spinal fluid in large amount from the external canal of the affected side, facial palsy and slightly subnormal temperature (97.80 degrees) upon admission to the hospital. This combination of symptoms is classical for fracture of the base of the skull involving the inner ear. Retention of consciousness and the non-involvement of other intracranial nerves would indicate the absence of increased intracranial pressure that might be found in case of a severe hemorrhage. Furthermore at the

operation there was no evidence of there having been any intracranial hemorrhage.

That the patient after a period of a week or more developed middle ear, mastoid and internal ear suppuration, complicated with intra-cranial involvement is a sequence characteristic of this type of injury and merely corroborated our previous diagnosis. That the patient was not operated earlier, as he should have been, was due to the fact that he did not come into our hands until very late (eleven days after the injury), and when he did his symptoms and temperature had so abated under conservative treatment by my predecessor in the case that we felt there was some possibility of recovery without operation. After the patient's condition took a turn for the worse it became evident to us that operation was imperative, but before operating it was necessary to determine exactly what was to be done at the operation. Accordingly, it was necessary to make a most careful functional examination, which resulted in the findings noted elsewhere in this report.

That our original diagnosis was correct was further proven by the results of the tests made subsequently to operation, which corresponded exactly with those found previous to operation. As a further corroboration of pre-operative labyrinth destruction we found that immediately after operation the patient manifested no change in his character or intensity of spontaneous nystagmus, nor any change in his vertigo, both of which had become minimal.

On the other hand, had there been any remnants of vestibular function prior to operation there would have resulted after operation of his inner ear a marked increase in vertigo, together with pronounced nystagmus to his unoperated side.

Concerning the selection of the operation I wish to say that it was predetermined by the functional findings, as should be done in all cases of basal fractures where there is suspicion of temporal bone involvement. This pre-operative examination should be done by an otologist or other who has the equipment and who is thoroughly familiar with the technique of the examination, and who is capable of interpreting the findings. The details of the operation have been fully outlined above.

As to the after-treatment it is likewise fairly covered in the report.

Concerning the nature of the intra-cranial complication I have but one suggestion to offer, and that is open to just

criticism. Clinically there was a meningitis, probably localized, certainly not diffuse. There was but one attempt made at spinal puncture, with an unsuitable instrument and it was necessarily faulty, much as I regret to mention it. The specimen of pus collected at the time of operation was misplaced by one of the nurses and never reached the bacteriologist, which is also regrettable.

Politzer (*Politzer Lehrbuch der ohrenkeilkunde*, 5th Edition, 1908) reports two cases of basal fracture involving the internal ear, but with much less detail than the case here reported. Politzer's first case was that of a man forty years of age, who was injured on the back of the head. He showed classical symptoms of basal fracture involving the internal ear, but no mention is made of facial paralysis. Seven weeks from time of injury the patient succumbed with symptoms of meningitis. Autopsy findings were basal fracture involving the inner ear of both sides, and basal meningitis.

The second case was that of a twenty-one year old man, upon whose head fell a mortar hod. He fell unconscious. After 14 days there was a return to consciousness: however he was totally deaf. He presented symptoms of equilibrium disturbance and right-sided facial paralysis. In the fifth week he presented symptoms of a diffuse lepto-meningitis which lasted for five days with fatal results. Autopsy findings were Suppurative Meningitis; fissure of the base of the skull involving both pyramids. Histological findings showed both inner ears to have been involved.

Bezold describes very accurately the various types of injury that may happen to the temporal bone from direct or indirect violence and differentiates injuries of one part from those of other parts, but does not cite any case of one-sided inner ear fractures: in fact, he claims that one-sided cases are extremely rare.

DISCUSSION.

DR. H. M. GAY, Philadelphia: It seems to me that this is a very important subject. During the past eighteen months we have had eight or ten cases at the West Philadelphia Homœopathic Hospital in which the fractures of the skull have involved the internal ear. It is important to determine in these cases whether the fracture involves the mastoid, the external auditory canal or the true inner ear. If we consider the anatomy of this region we shall see that the petrous of the

temporal bone is really a part of the skull; whereas the mastoid is attached to the external part of the cranial bone. Nasal fractures, although involving the ear will probably involve the middle ear. We often see fractures of serious character in which we can say positively that the middle ear is involved; but, in other cases that are not so badly injured, we may have a chance to save the patient. It is important that these cases should be examined carefully and a differential diagnosis made where possible.

MUSCULAR ASTHENOPIA.

BY

WM. M. HILLEGAS, M.D., PHILADELPHIA, PA.

ASTHENOPIA does not mean impaired vision, but—inability to use the eyes continuously for close work without a strained feeling or a sense of tension. The symptoms produced by this strain are—headache, eyeache, blurring of vision, blepharospasm, lachrymation, photophobia, neuralgia, blepharitis, styes, catarrhal and follicular conjunctivitis, keratitis, nausea, vomiting, vertigo.

The term asthenopia should be limited to the group of symptoms of subjective discomfort. The visible inflammatory evidences of eyestrain, when not due to local disease *per se*, or to constitutional condition, are practically always cured quickly by the correction of errors of refraction, while subjective symptoms of asthenopia are as often due to other causes than refractive errors. Asthenopia is not due to any organic disease of the eyes, but is usually accommodative and due to weakness of, or overworked ciliary or extrinsic muscles.

By refraction is meant the measurement of the deflection of the rays of light in passing through the eye, through the media of different densities. To obtain clear binocular vision the images as formed on the retinae and then the impression registered on the centre of vision in the brain must be equal—must fuse; if not, the eyes, through the muscles, ciliary and extrinsic, adjust themselves without conscious effort, overcome the errors, and the result is strain, and asthenopia.

Forms of Asthenopia: 1 Accommodative—due to errors of refraction, and to strain of the ciliary muscle; 2 Muscular—

strain of the extrinsic ocular muscles; 3 Nervous, 4 Reflex—nasal, kidneys, gastro-intestinal.

Widely varying results are produced by similar errors upon different individuals. Most eyes are quite tolerant, while some are intolerant to even a slight refractive error. Most people have demonstrable errors of refraction of which they are unconscious, as they are overcome without producing symptoms.

Each case must be studied separately and individually and then we often find that in some the asthenopic symptoms are not due wholly, if indeed at all, to the refractive error. Remember that the glasses must be worn with the eyes in their active condition in which nature intended them to be used, and not in the quiescent state, as under a cycloplegic.

Heterophoria (muscular imbalance) may be demonstrated in very many persons (with or without refractive errors) who have no symptoms of asthenopia, and also in many who have asthenopia from other causes, being compensated for physiologically. Heterophorias are symptomatic when the balance is disturbed by mental or physical causes through the nervous equilibrium.

Asthenopia of reflex origin, when due to nasal spurs, or deformities, disease of the accessory sinuses, dental conditions, kidney trouble, gastro-intestinal disorders, pelvic inflammations—require treatment for the cause before any lenses can be of service.

Nervous asthenopia—the eye reacts to trouble situated in distant parts and other organs react to trouble in the eye. We may have nausea and vomiting caused by ocular strain and we may have symptoms of asthenopia produced by indigestion.

Cases of asthenopia must be examined with the eyes under the influence of a cycloplegic, and if there is shown by the preliminary examination that muscular imbalance is marked, atropine is preferable to homatropine, giving the muscles more prolonged rest, and overcoming temporarily all possible strain under examination; it is impossible to examine cases of ciliary strain or heterophoria without the muscles at rest. At times the prescription of lenses correcting all the manifest and as much of the latent errors of refraction as possible will correct the asthenopia due to muscle imbalance—but far more frequently it is necessary to use other measures for the cure of the symptoms.

The general belief of the laity, and I fear they are supported

in their views by the larger part of the medical profession, is that symptoms of eyestrain are removable by wearing glasses, and that no other treatment is ever needed. This is quite incorrect as only that cause of asthenopia (accommodative errors of refraction) can be so treated successfully.

A routine examination, at the first visit of the patient, of the muscles of all cases refracted will save a lot of time later and in many cases much disappointment.

With the phorometer (Stevens) the phorias can be quickly and accurately measured if present, and if trouble is found it is best to measure the ductions—the power of each separate pair of extrinsic ocular muscles, using the Risley rotary prism in the phorometer for this purpose.

Determine the lateral insufficiency at the reading distance (14 to 18 inches) by the arm on the phorometer—the crossed line and dot test, as well as by the candle test for distance.

Remember that the power of adduction (the internal recti muscles) should be in proportion of 4 to 1 to the power of abduction (external recti). The total amount of adduction (30 to 60 degrees) and abduction (6 to 12 degrees) is not of so much importance, unless far below normal, providing the ratio is normal. Sursumduction, the power of the superior and inferior recti muscles, should also be measured, but faults here are not so often the cause of trouble.

Heterophoria—imperfect binocular muscle balance—a *tendency* of the visual axes to deviate from the normal.

Heterotropia—A *deviation* or turning from parallelism. Determine by using the cobalt glass test whether the muscle imbalance is a phoria or a tropia—it makes a difference in the treatment.

Strabismus—or squint—a *manifest* deviation.

Exophoria—tendency to a deviation outward of the visual axes, due to insufficiency of the internal recti muscles, or to an overaction of the external recti, or a combination of both, but usually due to the first named cause. Here the power of adduction is reduced. Small errors of this type are likely to give trouble on sustained work at the near point.

Esophoria—tendency to an inward deviation, due to insufficiency of the external recti; the power of abduction being reduced. Two or three degrees of this error seldom causes discomfort. Esophoria is a frequent cause of train or theatre or shopping headache.

Hyperphoria—tendency to upward or downward deviation.

Cyclophoria (Savage)—lack of equilibrium of the oblique muscles.

Marked decrease in the powers of duction, or a marked disparity between abduction and adduction, require special treatment, as it will yield but rarely to a mere correction of the ametropial.

Treatment consists of office exercise of the weakened muscles by prisms, or home exercise, or a combination of both. This is of especial benefit in exophoria, less so in esophoria, and of practically no benefit in hyperphoria. In exophoria use prisms base out in a trial frame at patient's home, focusing at a candle light or other fixed point at distance of 12 to 15 feet, and gradually moving forward so as to shorten the distance; increasing the strength of prisms every week or two. Vary the length of time of exercise and frequency according to results. In esophoria exercise only at distant point..

In hyperphoria if the correcting lenses do not relieve the symptoms, the muscular imbalance must be corrected by prisms added to the lenses, dividing the amount between the two eyes, base up in one eye, base down in the other. In esophoria, and less frequently in exophoria, this is also required at times; do not add the total amount of prisms necessary to overcome the heterophoria—nature will correct part of it when assisted—1-3 of the error is usually enough. Reduce this as rapidly as possible, having your patient report every few months, and remove the prisms entirely as soon as you can.

Tenotomy may be necessary, but do not cut a muscle for a phoria, though it may be done for a tropia if other treatment fails, or for strabismus.

Rest of the eyes, especially at the near point in cases of exophoria is important and imperative. Potassium iodide in small doses (5 grs. t.i.d.) seems of benefit; nux vomica, or strychnia have helped in some cases especially when there is nervous debility.

Keep your muscle cases under close observation, insist on their reporting frequently; it is just as necessary to watch the remedial action of prisms as it is to watch the action of powerful internal remedies.

The more attention I have given to the study of the eye muscles, their interdependence, the fact that for any movement of the eyeball at least two and usually three of the six pairs of

extrinsic muscles are working together or opposed—the more am I repaid for my work by the improved results in the treatment of the hosts of cases of asthenopia due to muscular irregularities.

ACUTE INFLAMMATIONS OF THE MIDDLE EAR.

BY

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To properly treat the acute attacks upon the auditory apparatus does not require the armamentarium of the specialist, but does call for a certain amount of skill in examination, a knowledge of anatomy of the head and the proper methods of examination and treatment. If he does not measure up to those requirements, the physician should be honest enough to call in competent counsel, for now the future usefulness of this apparatus may be preserved or forever impaired. Certainly all chronic forms of ear troubles should be referred to the specialist for he is, or should be, prepared with the necessary study, and the needed apparatus with which to do good work, including as they do a compressed air outfit, a variety of douches, sprays and vaporizers, tuning forks, massage apparatus, probes, applicators, curettes and eustachian catheters.

With these introductory remarks first let us briefly review the anatomy of the ear. Externally we see the pinna or auricle whose finer structure we will not consider, ending with the auditory canal which differs in shape in the child from that of the adult because the osseous canal is not developed before the fourth year. The internal ear consists of the drum head, or membrana tympani, which closes the ear canal and forms the outer wall of the middle ear chamber or tympanic cavity. In it are the three ossicles with their attaching ligaments, blood supply and nerves. Posteriorly we find the opening of the antrum and mastoid cells. Extending from the lower part to the pharynx is the eustachian tube. The mastoid cells are only present in the adult, a very important fact to bear in mind in the study of pus formation in this region, for it would be a mistake to attempt to obliterate mastoid cells where there are none. The inner wall of the tympanum, as the middle ear is sometimes called, forms the wall separating

it from the inner ear and presents the fenestra rotunda leading to the cochlea, the round eminence of the aqueductus fallopii, in the canal of which is the facial nerve, and the pyramid containing the stapedious muscle with its opening for the tendon of the same. This portion of the auditory apparatus is possibly the most important part of the ear, clinically considered, for here is the seat of most of the troubles which give rise to deafness and is the part we will study at this time. Again calling your attention to the fact that the anatomy of the child and adult differ, I will remind you that the Eustachian tube in the infant is proportionately much wider and shorter than in the adult, whereas the middle ear and mastoid antrum are almost as large as they ever become, anatomic conditions favoring the admission of disease germs from the nasopharynx. Hence the greater frequency of middle ear troubles in children.

Continuing our review of the anatomy of the ear we find the inner ear in the petrous portion of the temporal bone consisting of a complex cavity called the osseous labyrinth, which for our present purpose we will not study in detail.

Acute affections of the middle ear are common to all ages and conditions, but as I have said are rather more common to child life for some reasons already stated. To simply enumerate the causes would include in the lists—colds in the head, whether simple or due to germ infection, naso-pharyngitis, new growths in the nose or naso-pharynx, inflammatory swellings of the mucous membrane of this locality of whatever form, exanthematous diseases as measles and scarlatina, as also diphtheria. Trauma, as by forcibly blowing the nose, or in so doing forcing infected mucous through the Eustachian tube into this space. This may also occur in politzeration. As a result of any of these conditions we have a general hyperæmia of the middle ear mucous membrane. It is swollen through the enlargement of its vessels, infiltration takes place with more or less exudate either serous, mucous or sero-mucous. Pain is a prominent and early symptom demanding speedy recognition and relief. It may vary from a simple earache due to a traction upon a delicate membrane, to agonizing pain due to a pressure of accumulated fluids. Hearing is affected, varying in degree up to a total deafness. If the process continues and there be an accumulation of fluids, we may have a rupture of the drum head in from 12 hours to

three days and a discharging ear. Or we may have an intermittent discharge due to the fact that the opening is too small. There may be no rupture but a discharge through the Eustachian tube, the discharge showing at the nostril. Or the secretions may be retained, and becoming organized result in an ankylosis of the ossicles, meaning an impaired hearing forever after. The pus may be forced into the antrum and mastoid cells calling for surgical interference. Meningeal complications may ensue, thrombosis of the blood vessels or the sinus, endangering the life of the sufferer.

The collected pus in children invading the post auricular space will show up differently from that in the adult. The abscess will be seen on the surface as a swelling with displaced auricle in both cases, but because of the absence of mastoid cells and the persistence of the squamo-mastoid suture in infants, pus may readily find its way outward from the suppurating antrum.

The appearance of the drum membrane, as seen at the physical examination of the ear, varies with the stage of the disease at which the examination is made. During the first few hours after the onset of the inflammation a redness will be visible along the handle of the malleus, which, if observed later, will be found to have spread over the greater portion or even the whole of the membrane and to have become of a uniform cherry-red color. The land marks with the possible exception of the short process of the malleus, will be found to have disappeared, and the whole fundus presents an inflammatory state in which it is not easy to make out the ending of the walls of the external auditory meatus and the beginning of the membrana tympani. As soon as the exudate takes place into the tympanic cavity it is shown by the bulging of some portion of the drum membrane, the greatest bulging being most frequently seen in the upper and posterior portion, although it may occur in either of the lower quadrants. If the exudate be purulent the bulging is usually more limited in extent and most often in the extreme uppermost portion of the membrane. After rupture takes place it is not always an easy matter to locate the perforation, and more so if it be small. In fact to examine the ear canal and drum-membrane takes a certain amount of skill and experience, and the technique is only acquired by persistent effort. To get a good view of the parts covered with pus it should be absorbed with a cylinder of

absorbent cotton, or it may be washed away by gently syringing, bearing in mind we are dealing with an inflamed and softened tissue. Inflation by the valsalva, politzer or catheter method during the inspection will aid in demonstrating the true condition of the parts. It is of more importance to determine the size of the opening than the position, for subsequent treatment will depend in no small measure upon whether or not the opening is sufficiently large to provide ample drainage to the inflamed cavities of the middle ear.

The diagnosis of the middle ear troubles is usually not difficult, but the trouble is too often overlooked. Frequently we are called in to see a child showing every indication of suffering but of an indefinite character, with perhaps a little temperature, and if not careful in our examinations will be surprised to find a discharging ear in a day or two when we least suspected it. Pressing over the space between the ramus of the lower jaw and the mastoid process frequently elicits tenderness and assists us in locating the trouble. I am now speaking more of infants, as in adults the history usually is sufficient to put us on track of the correct diagnosis. In all we usually find a history of a previous catarrhal condition followed by pain, deafness and with the physical conditions already described. I might call attention to the fact that children often insist upon being held, the heat of the nurse being grateful to the sufferer, and noting this may be an aid in the diagnosis.

Prognosis, if the affection be treated intelligently and persistently, is usually favorable both as to life and future usefulness of the ear. But if, as is often the case, we as attending physicians, or the parents of the patient, be indifferent, the results are far from satisfactory and the foundation for impaired hearing is laid, or we may see the case end in meningeal complications and even life itself be sacrificed.

In the treatment the first duty is the relief of pain, which is best accomplished by the use of opiates, morphine hypodermatically in adults, deodorized tincture of opium in the child, and paregoric in the infant. After the pain is relieved active means of combatting or aborting inflammation should be instituted. Such remedies as are used in the active inflammations, as aconite and belladonna, are to be thought of. Our old school friends would begin by administering a saline draught, which should be repeated until several large watery stools are produced. Locally, as advised by prominent aurists, depletion as

an effective means of relieving pain and lessening the intra-tympanic congestion before the exudate had taken place in the tympanic cavity is practiced by the application of several, in the adult not less than three natural leeches to the post auricular region. You will not find these recommendations in homœopathic text books nor in the practice of many of the members of our school. However, to assist us in reducing the congestion and thereby aid us in relieving pain, which in part is also brought about by the anaesthetic effort of carbolic acid, in the milder cases we make application to the drum membrane of phenol-glycerine solution, ten parts of the former to ninety of the latter, supplemented with dry heat. The instillation of plain unmedicated water of the proper temperature is recommended by some as is the insertion of a Richards aural bougie, particularly in the case of earache of very young children. Should these measures fail to relieve the pain and abort the inflammation, and should it be found on examination that the exudate had taken place in the tympanic cavity, incision of the drum membrane should be performed at once. The incision should be made to include the bulging part of the membrane to favor free drainage. Some authorities advise that where the incision is performed early to include the mucous membrane of the inner tympanic wall in the cut. Of course surgical cleanliness is observed both at the site of operation and the instruments. The precautions are to be repeated at each recleansing to avoid reinfection from the auditory meatus. This part of the treatment is generally given over to the nurse, who generally in children is the mother. I am afraid more often redressing is never undertaken. Frequently we get to see the case only after the drum membrane has been ruptured spontaneously. It is then our duty to see that free drainage has been established, and to enlarge the perforation if it be insufficient.

After the pus has been evacuated the canal should be wiped dry and swabbed out with a solution of boric acid in alcohol, especially that part of the auditory canal where hair grows, to prevent infection and abscesses. This should be repeated at each subsequent dressing. If the amount of discharge be profuse and not easily wiped out it may be necessary to use the syringe. After evacuating the exudate and cleansing the external auditory canal we are advised to loosely pack by the insertion of a sterile gauze wick to the bottom of the auditory canal, and so placing the innermost end of such a strip that it

lies in direct contact with the incision of the membrane. Folds of the wick are then placed loosely over each other until the whole auditory meatus is full and a few coils are left lying loosely in the concha. When the discharge is profuse such a gauze wick is frequently saturated in a short time, and the re-dressing to insure perfect asepsis should be entrusted only to a skilled assistant. If this be impossible I think it a better policy to simply place a sterile gauze over the whole external ear, keeping it in place by a bandage or a thin cap, the gauze being replaced as needed. I believe this will give better results in the hands of the most people upon whom we must rely for our assistants. Personally, I advise a heavy sterile vaseline for anointing the external parts to prevent infection and subsequent trouble. To insure drying of the canal at the times of subsequent dressings it is advised to blow a small quantity of a drying powder into the canal, care being taken not to fill it and so defeat the drainage, but only a film of powder. Powdered boric acid or boric acid mixed with zinc is advised. Squibbs' surgical drying powder is used in some hospitals and I have found it a good preparation. It sometimes happens that after rupture, and even after free incision of the membrane, union of the lips of the wound takes place before the discharge subsides, in which case we often have a recurrence of the former symptoms of pain, temperature and so on, when it will be necessary to make a second and equally free incision of the drum-head.

During the height of the inflammation it is not wise to inflate the middle ear by any method. Before exudate had taken place the use of the Politzer often relieves the pain as if by magic. As the acute inflammation abates, however, and when the pain and other accompanying symptoms of the acute otitis have in a great measure disappeared, inflation is to be advocated, and if carefully performed by the Politzer bag or through the catheter the restoration of the inflamed middle ear tissues to the normal is thereby hastened. In these cases the tendency is often toward the retention in the tympanic cavity of a portion of the exudate which often becomes organized and binds the drum membrane and ossicles into abnormal positions resulting disastrously to the faculty of hearing in the future. Such cases are the ones the aural specialist often meets and must turn away with the discouraging answer, "No help for you." By the use of the proper measure as outlined much of this may be avoided. I will admit that to do all of this requires a cer-

tain amount of skill as well as time, but the results will amply repay.

Any one who has been in an active practice for a number of years will have come across cases where the exudate has entered the mastoid antrum and shows itself as an abscess in the post-auricular space. He will be compelled to treat the case under other lines. In the adult we must always be on guard for mastoid infection when the treatment will be along the surgical lines for that condition and which is not in the province of this paper to discuss. In children, because of the absence of mastoid cells a simple incision is often the only thing needed. Should the exudate within the middle ear become infected from without, the discharge becomes quickly purulent, tissue necrosis may take place and the disease finally become chronic. This puts it in the class of chronic affections and will not be considered here.

I have said nothing of the treatment that should be given the conditions which are often a causative factor of middle ear troubles. Of course they should be given proper care. I have seen the best of results in removing enlarged tonsils and adenoids which were a factor in recurrent attacks of this trouble. Sinus troubles should not be neglected, nor any inflammatory affection of the naso-pharynx.

In summing up we have a right to draw several conclusions: First, that acute inflammations of the middle ear, whether shown up as a simple earache or an attack accompanied with fever, is always a serious condition, or should be so considered. Physicians who do not so consider them do their patients an injustice.

The public should be instructed in the danger of neglecting anything from a simple earache to a running ear. Especially neglecting a discharging ear is a criminal wrong done the sufferer, for it seldom fails to produce more or less damage to the future usefulness of the hearing apparatus.

I believe that more than half of the more or less deaf are so because the case of running ear was left to heal itself. By far the largest part of the other half are deaf because of the neglected catarrhal condition of the nasopharynx. The foregoing being true the physician who does not or who is not prepared to treat these conditions and does not advise the patient to seek relief elsewhere, is not doing justice to his patrons.

Treating a suppurating ear, acute, is a surgical measure.

and proper drainage, the utmost cleanliness and the best skill are necessary.

The promiscuous treatment of acute middle ear disease by the laity is to be condemned.

Filling the ear with cotton too often not replenished, frequently does more harm than good in acute middle ear diseases. The practice of filling an inflamed ear with onions and greasy lotions is to be condemned in the most vigorous fashion.

A suppurating ear is dangerous as long as it is discharging and should be under competent treatment until fully healed and the former hearing fully restored if that be possible.

Traditional beliefs that children will outgrow their aural ailments, and that a discharging ear is but an annoyance, or, stranger still, of benefit to the individual, is absurd, and the laity should know it.

Finally, we as physicians owe it to ourselves as well as to our patrons that we use every means to make ourselves proficient in the diagnosis of these acute ear affections.

I have been struck with the immense possibilities in neglected and incompetently treated ear affections as I have prepared this paper, and reviewing the chronic cases as they present themselves for relief but emphasizes the importance of the subject. Even making an examination of the auditory canal is often not an easy thing, and I have been surprised to find how few men are able to even use a head mirror well, much less see to the bottom of as small and tortuous a tube as the external auditory canal. And if they cannot do this, how can they tell what to do when these parts are in trouble, much less intelligently treat them.

TYPHOID BACILLI CARRIERS.—Hirschbruch., *Berliner klinische Wochenschrift*, Berlin, June 22, 1914, states that the great difficulty in discovering bacilli carriers is that they eliminate the bacilli only intermittently, as he shows by a number of instances from the Metz station. One woman was examined daily and the findings were negative fifty-two times and positive only twice, and yet typhoid bacilli were found at necropsy. In another woman examined regularly once a month, at one time, there was a negative interval of three years and ten months between numerous positive findings. Typhoid bacilli were found in 1910 in the stool of a woman who had typhoid forty years before. She died three years later, and nine days after her death another inmate of the house developed typhoid for which she was evidently responsible. Some of the known carriers voided the bacilli only after taking castor oil, others only after aloin and podophyllin, while in two of the known carriers elimination of the bacilli could not be stimulated by any of the numerous purgatives tried.—*Therapeutic Gazette*.

BUREAU OF MATERIA MEDICA AND PROVINGS

DEFINING ACCURATELY—ONE ESSENTIAL STEP IN AUTHENTICATING THE SYMPTOM—ILLUSTRATED BY DEFINING "CHARACTER OF COUGH."

BY

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THE authentication of the symptom in the proving of drugs, we still maintain, is the greatest work before Homœopathy to-day. The law of "Similia" is based upon this symptomatology, and hence it cannot be too accurate. The symptomatology of drugs, as first recorded so carefully and fully by Hahnemann, does not as yet appeal to any but the Homœopath. Hence the field and work still belongs to the Homœopath exclusively.

To give a drug to a healthy person, and to record accurately the symptoms thus produced, is a scientific process that will stand forever. These records will be amplified and corrected, but the Pure Materia Medica, that we are appropriating as the Homœopathic Materia Medica, will never suffer extinction.

The subject of the authentication of the Homœopathic symptom was fully considered in a paper presented to the American Institute of Homœopathy at Narragansett Pier in 1911.

This paper will partly, though incompletely, illustrate one of the essential steps in this process, viz., "Accurate Definition" as necessary to the establishing the truth of the symptom in the proving of drugs. The symptom "Cough" has been selected for this illustration, and the demonstration shall be based upon the most complete and best of our Repertories—that by Dr. J. T. Kent of Chicago, Funk and Wagnall's "New Standard Dictionary," "Century Dictionary and Cyclopedia," March's "Thesaurus Dictionary," and Lippincott's "New Medical Dictionary" by Cattell.

The "Character of Cough" in Kent's Repertory is designated by nearly or quite one hundred (100) attributes. These may be grouped according to—

- I. Method of raising secretion, as—
hawking, hemming, cough;

2. Ease or difficulty of raising secretion, as—
difficult, tight, loose;
3. Amount of secretion, as—
dry, tight, moist, loose;
4. Sound emitted, as—
asthmatic, barking, croaking, croupy, crowing, deep-sounding, hissing, hoarse, hollow, metallic, rasping, rattling, resonant, ringing, rough, scraping, screeching, sharp, shrill, sibilant, sonorous, soundless, stertorous, toneless, wheezing, whispering, whistling, whooping;
5. Accompanying and resulting phenomena, as—
asthmatic, burning, choking, croupy, distracting, distressing, exhausting, fatiguing, gagging, gastric, harassing, hectic, irritating, measles, menstrual, nervous, oppressive, painful, panting, racking, rasping, rattling, scraping, scratching, screaming, smarting, smothered, splitting, straining, strangling, suffocative, tearing, teasing, tedious, tickling, titillating, tormenting;
6. Intensity or severity, as—
concussive, convulsive, forcible, hard, irrepressible, irresistible, overpowering, racking, severe, shaking, shattering, splitting, straining, tearing, violent;
7. Inception, as—
explosive, sudden;
8. Duration, as—
hacking, short;
9. Continuity and rhythm, as—
constant, continuous, convulsive, incessant, interrupted, intermitting, paroxysmal, periodic, persistent, rapid, spasmodic, uninterrupted;
10. Cause of cough, as—
measles, menstrual, nervous, sympathetic, tickling, titillating;
11. Source of cough, as—
bronchial, deep, gastric.

This classification is arbitrary, and is made only for the purpose of grouping similar varieties for easier consideration. Many of these varieties have a self-evident definition. It would be interesting to define each, but we will define only as neces-

sary for our immediate purpose, viz., to show how essential accurate definition is to the proper authentication of the symptom, and the result of such a work. The fine distinctions often existing between synonyms must be preserved, and generally were intended to be made undoubtedly, but it is not only necessary to experience distinguishing characteristics, it is equally necessary to express in words precisely what is felt, so that there may be no ambiguity in fully comprehending them.

The distinction between "hawking," which means to forcibly clear the pharynx of phlegm; "hemming," which means to clear the larynx of phlegm and making the sound "hem" in doing so; and "coughing," which means a sudden and noisy expulsion of the breath by an effort to rid the air-passages of some secretion or foreign matter—these distinctions are self-evident.

"Difficult" and "tight" present two perplexities not often encountered. The term "difficult" may apply to the ability to cough, or to raise the phlegm, because of many reasons that suggest themselves. "Tight" is a colloquialism that, according to the dictionary, should signify a painful, hacking cough without expectoration. The right of a place for these in a repertory may be questioned. If accorded such a paragraph, an explanatory or descriptive word at least should accompany each remedy. Although serving such a purpose this would not be for the purpose of differentiation.

"Dry," and "loose" or "moist" have self-evident definitions.

A "tight" cough should always be dry, but a "dry" cough need not always be tight. Hence formica and zizia, for instance, should not be listed under "tight" and omitted under "dry."

"Asthmatic" and "wheezing" are synonymous, and are so treated in the Repertory.

"Barking" is a short, abrupt, explosive sound, but is distinctive and needs a distinct paragraph. However, all "barking" coughs are short, and allium cepa, capsicum, cimex, clematis, corallium rubrum, cubeba, hippomanes, lac caninum, lyssin, nux moschata, phytolacca, stramonium, and veratrum album, should be found under "short" cough as well. "Barking" is also abrupt or sudden and explosive, hence all the "barking" remedies should be listed in these paragraphs—
which they are not.

"Croaking" is another imitative composite sound, but dis-

tinctive, and needs its own paragraph as awarded, but it is also a hoarse, hollow, low-pitched or deep-sounding and harsh sound. Its remedies should therefore by rights also be found under these separate paragraphs, which they are not.

A "croupy" cough is hoarse like in croup. Its remedies should also therefore be found under "hoarse" to be accurate, but they they are not.

"Crowing" is considered synonymous with "croupy," and is so treated in the Repertory.

The distinction between "croaking," "croupy," and "crowing" scarcely justifies separate paragraphs.

"Deep-sounding" is a low, sonorous or heavy sound. All "deep-sounding" coughs are sonorous, though "sonorous" sounds are not necessarily deep-sounding, but they are not so treated in the Repertory.

"Hissing" and "sibilant" seem quite synonymous, and yet they occupy separate paragraphs and have different remedies listed.

"Hoarse" and "rough" are so nearly synonymous that the distinctions seem too finely drawn when separate paragraphs are awarded to them, and different and distinct lists of remedies are assigned to each.

The same may be said about "rasping," "scraping," and "scratching" coughs. Indeed the five terms, "hoarse," "rough," "rasping," "scraping," and "scratching" are very similar.

"Resonant" and "sonorous" seem synonymous and may be deep-sounding also. The former two suggest different remedies and "deep-sounding" lists the remedies of both.

"Ringing" and "metallic" seem synonymous, yet distinct lists of remedies are assigned to the separate paragraphs.

"Screeching," "sharp" and "shrill" seem synonymous, but command separate paragraphs and distinct lists of remedies.

"Soundless" and "toneless" are synonymous.

"Choking," "smothered," "strangling" and "suffocative" seem synonymous, but have separate paragraphs and long lists of distinct and entirely different remedies.

"Burning" and "smarting" are painful, but "painful" need not be smarting or burning, hence the "burning" and "smarting" remedies should all be found under "painful"—which they are not.

"Racking," "splitting," "tearing," and "straining" are so

closely analogous that one wonders why they are considered separately and with different remedies.

"Forcible," "hard," "severe," "violent," and possibly "straining" is another group for similar treatment, that they do not get.

"Tickling" and "titillating" are synonymous.

"Tormenting," "teasing," "harassing," "irritating," "distracting," "distressing"—all are so closely analogous that separate paragraphs, with distinct lists of remedies are confusing to say the least.

"Exhausting," "fatiguing," and "tedious" are so closely synonymous that the remedies listed under "tedious," for instance, should at least be referred to under "exhausting"—which they are not.

"Concussive," "shaking," "shattering," and possibly "overpowering" and "convulsive" should also be worth cross-references at least.

"Explosive" coughs are always sudden, but "sudden" coughs need not be explosive, and this fact is altogether disregarded in the Repertory also.

Likewise a "hacking" cough is always short and interrupted, but a "short" cough need not be hacking. The same criticism last given applies here.

"Constant," "continuous," "incessant," "persistent," and "uninterrupted" are worth cross-references at least.

"Paroxysmal," "spasmodic," and "convulsive" seem synonymous, but separate paragraphs with differing remedies are awarded these.

"Periodic" and "intermitting" it would seem should also receive similar recognition.

And so on.

It is necessary to emphasize the fact that this paper does not desire to belittle the great work of Dr. Kent's Repertory in the least. That book is one of the most useful on our shelves, and we promptly buy its latest edition in best binding.

It is also necessary to protest against the wholesale elimination of the finest distinctions between coughs, and the classification of all coughs under a few heads. This refinement of differentiation in symptomatology is a key-note in the science of *Materia Medica Pura*. We protest vehemently against any attempt at vandalism because the laboratories cannot decipher the cause or explanation of apparently insignificant distinc-

tions. The arguments of the laboratories and ridicule of the old school are particularly bigoted in this matter, probably because it is basic with Homœopathy. Homœopathy alone, of all methods of applying remedies to the sick, believes in this discriminating care in observing the effects of drugs upon the well, discriminating care in observing the symptoms of the sick, and the scientific adaption of the one to the other. To agree would mean to accept.

But these facts must not make us less careful or unscientific. Proving symptoms must be registered most accurately and we must all understand the same thing whenever we revert to them. Our dictionaries and a common comprehension of definition—accurate definition—must never be controvertible.

Therefore synonyms should not only be favored with cross-references, but should also apply to precisely the same lists of remedies.

Analogous symptoms should be freely favored with cross-references, and their remedies more carefully scrutinized and re-arranged.

Componental symptoms should also be properly credited with cross-references, and their remedies arranged accordingly.

This paper does not presume to do more than draw attention to a work that should become official by a consensus of opinion arrived at by a conference of our ablest minds. The illustration, we trust, has been sufficiently elaborate to convince us of its importance. The result will be a considerable reduction in the bulk of our Repertory. This accuracy of definition will also be satisfying to the physician, and will often draw attention to the simillimum that might otherwise be overlooked. And most of all it will be one step in establishing the truth of our symptomatology. The symptom finally fully authenticated will round out the perfect science that the Homœopathic Materia Medica is.

A FEW THOUGHTS ON THE STUDY OF OUR MATERIA MEDICA.

BY

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THE study of our materia medica has presented probably more points of perplexity and discouragement to the average student of medicine, than have any or all the remaining studies of the medical curriculum.

I shall not, in the few minutes allotted to this paper, attempt to discuss in extenso, the obstacles to a mastery of this subject, but will simply present a few thoughts upon an easy and natural plan for the study of materia medica, one that will not only minimize every obstacle to the attainment of the desired knowledge but will enhance interest in the subject in proportion to the earnestness and ambition of the student.

First: we must learn the general field of action of each drug.

Secondly: we must learn the specific characteristics of each remedy.

Thirdly: we must understand the pathological significance of each drug pathogenesis.

The first requisite may be acquired through a careful study of the so-called physiologic effects of the drug.

The second can be gained only through the provings, plus the clinical experience of good observers. Such experience has largely been recorded and can be had, for study or reference, in standard works on materia medica; where it will be found as italicized or starred symptoms. Each such symptom having been confirmed by one or more reliable observers.

Hahnemann says, in Section 153 of the *Organon*, "we ought to be particularly and almost exclusively attentive to the signs and symptoms that are *striking, singular, extraordinary* and *peculiar*, (characteristic)." for such must correspond to the symptoms of the patient, in order to constitute it the remedy for the cure.

Thus, it will be evident that in order to understandingly employ our materia medica, we must possess a comprehensive knowledge of the pathogenesis of each drug. This does not imply a verbal memorizing of every symptom, but it does imply a thorough acquaintance with the symptomatic trend of each remedy.

A comprehensive review of the pathogeneses of any given

set of drugs selected for study, will demonstrate and emphasize the remarkable similarities in each, and will make equally plain the characteristic variations in sensations and modalities, by which to differentiate their use.

These must, of course, be memorized, if we would attain proficiency in the use of our *materia medica*.

Such knowledge is within the reach of all. Its lack depends primarily upon one or more of the following causes: *inaptitude* of the student, (such have over-estimated their ability); *disinclination* for the study of *materia medica*, (such have mistaken their vocation); *skepticism* in regard to the reliability of the provings, (such have failed to give credit to workers at least as honest as themselves); *skepticism* as to the scope of the law of similars, (such have failed to study the phenomena of nature comparatively, in health and in disease, as clearly portrayed by Hahnemann in the *Organon* and in the *Chronic Diseases*, and are still unfitted to follow their profession).

The first condition scarcely can be overcome; the second is a moral fault, difficult but not impossible of correction; the third, most frequently is the direct result of faulty teaching, coupled with lack of observation and experience; the last depends upon a faulty viewpoint of disease and of the remedial sphere of drugs as applied to its cure.

Taking for granted, the possession of ability and a willingness to devote an adequate amount of time and energy to the acquirement of this most important branch of his profession, the beginner will find it both advisable and interesting, to select a few of the most useful polychrests together with their most nearly related antipsorics, for the initial effort. The following would prove well adapted to the purpose: aconite and hepar, belladonna and calcarea, bryonia and kali carbonicum, chamomilla and mercurius, china and antimonium crudum, cinchona and arsenic, ignatia and sepia, ipecacuanha and cuprum, nuxvomica and sulphur, pulsatilla and lycopodium, rhus and phosphorus, spongia and iodine, adding as memory permits remedies which though related in their general field of action, nevertheless present strongly contrasting mental symptoms and modalities.

In this way the student may, even during his college course, acquire a good working acquaintance with all the usually prescribed remedies. He will not only learn to know his remedies but will learn to *know*, when he *does not know* the simillimum

to any given case. Application and memory are essential to the acquisition of the required knowledge.

Finally, if we would employ our provings to the greatest advantage, as guides in the treatment of disease we must, as suggested, understand the pathological significance of each pathogenesis.

With the still too numerous "gaps and guesses" in our knowledge of physiology, one may well feel discouragement, but when we contemplate the wonderful advance made possible through a knowledge of the functional importance of the internal secretions, our sense of discouragement must give place to a confident anticipation of the early removal of such hindrance to a practical knowledge of functional processes, whose integrity is essential to health.

In this connection however, I must call attention to the fact, that despite our lack of knowledge in reference to many of the phenomena of physiology, we still have a safe guide to the choice of the remedy in the totality of the symptoms. In fact, the picture of the disease thus presented, must ever remain the most important factor in the selection of the true *similimum*.

By way of illustration of the foregoing suggestions let us make a brief review of the field of action of *cina*, which by reason of its short pathogenesis will, on this occasion, best serve our purpose. Especially useful in the diseases incident to childhood, its general field of action seems limited, practically, to conditions originating in or markedly aggravated by gastro-intestinal irritation. Pathological tissue changes are few, and seem to consist mainly of catarrhal conditions; we must however note an extreme sensitiveness of the nervous system which, though evidenced by no appreciable organic change, nevertheless shows an intimate relation to the cerebro-spinal centers.

From its provings however as well as from clinical experiences, we should rule organic changes of the grosser type out of consideration.

The gastro-intestinal affections are characterized by symptoms of great exhaustion and general anæmia, and are accompanied by marked disturbance in the sphere of general nutrition. This is evidenced by the feeble, lax, tired, trembling body, the pale face, coldness of the hands and feet, etc. The sensorium affords as evidence, vertigo, and a weak, hollow,

empty feeling in the head with inclination to vomit. The occurrence of furuncles bears witness also to a depraved nutrition with consequent accumulation of toxic waste products in the blood.

As might be expected, such patients show a marked tendency to catarrhal affections. In the cina patients we also find a characteristic involvement of the nervous system: in fact, the preponderance of the nervous symptoms over the local affection marks the rôle that cina plays in such conditions as whooping cough, bronchitis, spasmodic asthma and gastro-enteric catarrhs.

Thus briefly though comprehensively we have portrayed the general field of action of cina, nevertheless these facts still afford no reliable basis for the selection of this remedy in any specific case. They lack that individuality so essential to true homœopathic therapeutics.

The next step therefore, in our study, must embrace the symptomatology as presented in the provings. Here we find certain distinguishing characteristics which unerringly mark the remedy as distinctively different in its symptom complexes from every other remedy.

Specifically then we will say, the mental attitude is characteristically whining and complaining. The child does not want to be touched, (*agaricus*, *ant. crud.*, *ant. tart.*, *arnica*, *chamomilla*, *lachesis*, *silicea*); cannot bear you to come near it. Desires many things which when offered are refused (*ant. cr.*, *bryonia*, *chamomilla*, *pulsatilla*, *rheum. staph.*, *sulph.*); is not pleased or satisfied with anything; uneasy and distressed all the time.

Here we have a definite and typical picture of the mental condition, which will prove an unerring guide in otherwise suitable cases.

The alimentary tract gives us as characteristic, dryness of the mouth and especially of the palate; capricious appetite; nausea; vomiting: of mucus,—of food and bile,—of lumbrici.

Pain in the stomach is quite intense, or we may have a gnawing sensation as from hunger. Pinching or cramplike pressure transversely across the epigastric region after a meal, is quite characteristic. Cutting and pinching in the abdomen as from worms.

Such patients have the well known symptom, picking at the nose or anus; or, the child rubs the nose on the pillow, on the

nurse's shoulder, or with the hands. This symptom may occur late in cholera infantum being associated with the hydrenccephaloid condition of Marshall Hall, and may be a forerunner of convulsions. The abdomen may be hard and distended and painful on pressure. The stools, watery, of whitish mucus, or, of greenish slime; or may be bloody. Lumbrici and ascarides may be discharged with the stools.

Involuntary urination often occurs with these worm affections.

The cina patient presents a pale, sickly appearance of the face with bluish margins around the eyes; white and bluish appearance around the mouth; face pale and cold, or one cheek red the other pale, (acet. ac., acon., arnic., borax, cham., ignat., mosch., rheum, nat. mur., stan., tabac.)

We will also find trembling of the body with shivering sensation and yawning; all bearing evidence to the depraved nutrition and the anæmia.

The catarrhal condition of the respiratory tract is characterized by bronchial rales, and in contra-distinction to the intestinal state, we find much frothy saliva in the mouth, with the bronchial rales. Violent paroxysms of cough; gagging cough in the morning, on rising. The child is anxious, catches her breath and becomes very pale in the face; is afraid to speak or move for fear of bringing on a paroxysm of cough, (bryon.). Before coughing the child rises suddenly, looks wildly about, the whole body becomes stiff, consciousness is lost, seems as if she would have an epileptic spasm, then the cough follows.

Cina may be indicated in convulsions, reflex to intestinal irritation, as in helminthiasis; or in convulsions occurring during cholera infantum.

We have here *briefly* portrayed the field of therapeutic action of cina, and have presented the *major characteristics* leading to its choice.

Having thus reviewed a given remedy we will necessarily acquire a correct and practical knowledge of its sphere of action, and more, we will gain such a knowledge of its special sphere of action, the *genius of the remedy*, as Dr. Hering called it, that even when the memory fails to retain the mere verbal expression of the symptoms, the specific genius of the remedy will so assert itself in the mind of the prescriber, as to impel him to a correct conclusion. It is more than simply knowing the symptoms: it is knowing the remedy.

Time forbids making comparison with the antimony.

DISCUSSION.

DR. J. M. HEIMBACH, Kane: I do not consider myself qualified to discuss a paper like that of Dr. Korndoerfer, but I should like to bring out a comparison that helped me somewhat in the study of *materia medica*, some years ago. I think that this might help some students of *materia medica* at the present time. As I look around here, I see no two persons who are alike. There is a difference between them, although it may be but a slight difference. It is the same with remedies. We have remedies that have symptoms so characteristic that they always stick out like a wart on a man's face; while other remedies have symptoms that are not so prominent. It is well to start the study of *materia medica* by differentiating the various remedies as we would human faces, starting with the most characteristic, and then taking up those harder to differentiate. In this way we would get at the real gist of drug study and remember it better. The difference between the study of human faces and that of drugs is that one is the more concrete, and the other the more abstract. In human faces, you have the concrete picture; while in drugs, you must study the subjective symptoms and try to form a mental picture of the drug from them.

DR. W. G. DIETZ, Hazelton: The study of *materia medica* has always had a certain fascination for me, and I thoroughly agree with Dr. Heimbach in his remarks. In studying this subject, one should not merely take a hasty survey of a large number of drugs, without any clear conception of any one of them. In other words, to use an old proverb, one should not be a "Jack of all trades, and master of none." My idea of the proper way to study *materia medica* is this: It is far better for a student to begin by getting a complete and sharp knowledge of the principal remedies. He should know these well, before taking up others. It is of no use to try to learn the whole subject at once. It is too big. The young student sees a great similarity in the pathogenesis of the different remedies. They all look alike to him, if he tries to learn too many at once. It is better not to study a complete or large pathogenesis, but to get a sharp, fine outline of a given remedy with its principal symptoms. There is no easy way to success in the study of *materia medica*. You cannot make it by machinery. It means work, and hard work, and grinding work, and clean and sharp application. Then you get so that you know when a

certain remedy is indicated and, just as distinctly, when it is not. If a person has great restlessness, of course we think of aconite; but there are thousands of other remedies for great restlessness. Nevertheless, as Dr. Korndoerfer has said in his paper, these can be differentiated by their modalities. First know a few remedies well, and then apply the principles of comparison. In an old book, Boenninghausen's *Epitome*, the author, after each symptom of a remedy, gives three or four other remedies that have the same symptom. He does not differentiate them, but brings out the principle that these other remedies have the same symptom, and leaves it to the student to refer to the other remedies when the case comes up,—to go from the general to the particular. This is a very good plan.

BUREAU OF PEDOLOGY

WHOOPIING COUGH.

BY

DR. F. M. E. HOWELL, READING, PA.

THIS disease, also called Pertussis, Pertussis convulsiva, etc., is an infectious disease characterized by an inflammation of the respiratory tract and a peculiar paroxysmal cough. The disease is communicated principally by inhalation of the droplets thrown off by the patient in coughing. The disease can be carried directly from one to another, on eating utensils and clothing, although the germ is said to have a very short life after it leaves the respiratory tract. Children are much more susceptible to the disease than adults. It has become a disease of all races and climates, and is endemic in most cities, epidemics occurring from time to time. Catarrhal inflammation of larynx, trachea and bronchi are regularly found. Bronchitis is looked upon as a complication. Broncho Pneumonia is a frequent complication and is responsible for a great deal of the mortality resulting from this disease. The incubation period is given as from two days to two weeks. Symptoms: the invasion begins with a catarrh of the larynx, trachea or bronchi. This lasts for from ten days to two weeks but instead of the cough abating, toward the end of this period it grows worse. This catarrh is of varying degrees

of severity, but regularly the cough seems disproportionate to the physical signs in the chest, there is scarcely any fever or malaise in this stage.

Toward the end of this period of invasion the cough begins to assume the typical character which gives its name to the disease. This cough comes in paroxysms, during which the child coughs continually for some seconds, at the same time holding its breath, and at the end of the paroxysm taking a long stridulous inspiration which sounds like the word "Whoop." During this attack he becomes blue in the face, the eyeballs become prominent and diffused, the veins stand out, and the child presents the appearance of suffocation. This paroxysm is apt to be repeated two or three times, the respiratory whoop being given at the end of each, until some tenacious mucus is expelled or vomiting is produced.

Whooping cough is the only disease in infants where there is actual expectoration of profuse amounts of mucus.

It may be some hours before another set of paroxysms begins. The child grows to know when the attacks are coming, and will stand for support against some stationary object, usually with his hands braced on his knees. Epistaxis is often an accompaniment of a severe paroxysm, and after an attack the child is very much exhausted and often in a profuse perspiration. These paroxysms are more frequent by night than by day, and may be repeated many times in the twenty-four hours. They vary both in intensity and frequency very much. Exercise, shouting, crying, draughts, eating, drinking, or excitement will often develop a paroxysm.

The general health of the patient suffers mainly from interference with sleep, and from the inability to retain sufficient nourishment on the irritable stomach. Owing to this, many children become greatly emaciated.

This paroxysmal stage lasts for from three to six weeks, but is often continued over a much longer period. In some cases a whooping habit seems to be developed which lasts many months. The disease ordinarily disappears very gradually, the paroxysms becoming less frequent and less severe until they stop.

In uncomplicated cases auscultation gives no physical signs. If bronchitis is present, as is so frequently the case, the coarse rales and sibilant and sonorous breathing of this disease are found. If broncho pneumonia complicates the disease we

find the characteristic signs of this lesion. Bronchitis and broncho pneumonia are the commonest and most serious complications of pertussis. Hemorrhages from the nose or mouth, into the conjunctiva, or into the meninges are seen from time to time. The frenum of the tongue is apt to be torn and ulcerated from the irritation of frequent coughing. The vomiting after the paroxysms may be looked upon as a complication when it interferes with the nourishment of the patient. Convulsions and various forms of cerebral paralysis may complicate some severe cases in infancy, hernia and prolapsus ani may result. Tuberculosis may follow as the waking up of a latent condition or as an infection through the inflamed mucus membranes.

Diagnosis: A method for certain early diagnosis of whooping cough would be of the greatest practical service in the prevention of its spread, but during the first stage the diagnosis of whooping cough is impossible in the majority of cases.

The history of exposure to infection of whooping cough in a patient not protected by a previous attack should make the physician suspicious of this disease when he finds a cough with few or no signs of bronchitis, especially if there be an elevation of temperature out of proportion to the severity of the bronchitis. During the prevalence of an epidemic all cases of cough not due to any well recognized cause should be looked upon with suspicion and the parents instructed to look for the appearance of the whoop, which is indeed the characteristic symptom of the disease, but it does not appear until the second stage of the disease.

In infants under six months of age and in very mild cases in older children, the diagnostic whoop is often absent. Here we must depend on the history of exposure, on the history of a quiescent or incubative stage, and on that of a prodromal catarrhal stage; on the paroxysmal character of the cough, generally more frequent at night; on the congestion of the face during the paroxysm, the expectoration of the characteristic glairy mucus, and the vomiting of the contents of the stomach.

Whooping cough is the only disease of infants where there is actual expectoration of abundant mucus.

In many cases it is a very difficult matter to decide whether a patient has whooping cough or merely a bronchitis with copious secretion of mucus, causing suffocative or spasmodic

attacks of coughing. Isolation of doubtful cases until the diagnosis is clear should be the practice even though the inconvenience should be complained of by the parents.

Prognosis: Whooping cough is a disease frequently occurring in very young infants, and in these cases it is an extremely fatal malady, as it is apt to be complicated by broncho pneumonia, which in itself is an extremely fatal disease at this age, the first two years of life. In older children and without complications it is not much to be dreaded, infancy and old age, and complications are the dangerous sides of this disease.

Treatment: Belladonna, antipyrin, bromoform, cocaine, heroin, quinine, chloral, sulfonal, anit tussin, pertussin, ichthyol, antiseptics and hypnotics. Pertussis bacterin and mixed bacterins, are popular drugs with the dominant school. Townsend says, "As the disease is a long and debilitating one it is plain that all drugs that interfere with the appetite, that disturb the digestion, that depress the heart, should be carefully avoided. It is far better to depend upon hygienic treatment alone than to do harm in these ways, and render the patient more liable to complications."

It is quite certain that the homœopath is seldom attracted from the list of homœopathic remedies that have been tried and found effective in the treatment of all cases of this disease. The bacterins and vaccines, perhaps at this time receiving the most attention. I have had very little experience with the bacterins. The necessity of frequent injection in many cases and the natural dread of the patient for hypodermic injections makes me hesitate to adopt a practice that in the majority of cases at least seems to hold out no better prospects than the administration of the easily prepared and administered homœopathic remedy. Drosera and ipecac alone will control a large majority of cases and carry them along to an uneventful recovery. In complicated cases the selected remedy again seems to be so capable of producing results that desperate and empirical methods are seldom resorted to by the homœopath who has had the condition under observation a reasonable length of time.

I believe that hygiene and nutrition are most important in the treatment of whooping cough and as an aid to the remedy and the prevention of complications.

The patient should be placed under the most favorable hygienic conditions that it is possible to obtain. When indoors

special attention to ventilation, avoiding draughts and all other conditions that tend to favor the possibility of the patients catching cold. In good weather the child should be out of doors unless complications prevent. The number of paroxysms while the child is out of doors is decidedly less. Salt baths, sponge baths with good friction, alcohol rubs, especially after paroxysms when the patient is broken out in a profuse sweat, and proper clothing at all times.

The diet should be carefully looked to and the feeding in cases with a great amount of vomiting can be arranged to avoid too close a proximity of meals to the times for the paroxysms. As cough and vomiting are apt to occur on awaking, in the morning, it is better to wait an hour or so till that has passed and as the child has a paroxysm frequently on being put to bed, supper should be at least an hour before bedtimes. Children showing a decided degree of emaciation should be fed on easily digested foods or peptonized milk and feedings given as soon as the paroxysm and vomiting are over, giving the stomach a chance to dispose of some food before the vomiting again deprives it of its contents.

Prophylaxis: The only effective means of prevention of the spread of whooping cough that we have is isolation.

This is a very difficult thing to accomplish because the disease very often has a good start before the physician is called and because of the fact that so many cases run a mild course and it is impossible to impress the parents that it is necessary to keep them away from public conveyances and places where they come into contact with other children. Not realizing as the physician does that while the older children are better able to combat the disease, infants are highly susceptible and a fatal case can develop from infection of an infant by a child who has only the lightest form of an attack.

The disease is infectious before the whoop develops and this again makes it very difficult to control the conduct of the patient as the disease not being recognized at this stage the necessity for keeping the child away from others does not suggest itself. It would be a good plan with whooping cough so universal a disease and one that we have almost always with us, to teach the public to look upon all catarrhal coughs as contagious and to avoid contact with individuals having such a cough, in the case of children preventing their mingling until the cough has disappeared.

My only reason for writing this brief paper is to emphasize the fact that nothing is being done in the way of prevention. Health authorities are lax in the presence of an epidemic simply because there is so much laxness upon the part of the parents of children and even those who have not had the disease, a great many still believing in that old silly idea that the children will have it sooner or later and they may as well have it now and get over it. When a case develops where the child does not get over it then every one is to blame for allowing somebodies' children to run around with other children when they have the whooping cough. Doctors themselves are very lax, not only in failing to report the cases that come under their observation before they develop the whoop, but even afterward, especially the homœopath here, who prescribes in the office for a case of whooping cough and never has the patient brought to him for diagnosis nor has an invitation to observe it at the house. Of course these cases as far as the case itself is concerned, come out all right in most instances, but the damage they can do to others it is impossible to calculate, though most of the spread is due entirely to infection from these carelessly handled cases.

There should be some arrangement in large cities whereby the physician and also laymen may report any case which in his opinion might develop into a case of whooping cough and have it quarantined under the observation of the physician or the city health officer for time enough to reach a positive conclusion regarding its nature and if it is not whooping cough the quarantine may be raised at once upon notification of the physician and the child not compelled to stay out of school the prescribed time required of a genuine case.

An effort upon the part of all concerned to give the matter of prevention more attention would result in the reduction of mortality and in the number of cases of this disease.

DISCUSSION.

DR. ANNA D. VARNER, Wilkinsburg, Pa.: I find that many persons try to suppress the fact that a case of whooping cough is present in their homes in order to avoid quarantine. Some people do not call in a physician for fear of being quarantined. I think that if a few of these people were fined it might overcome the tendency to conceal the existence of the disease in their families.

DR. MALACHI W. SLOAN, Philadelphia: I would like to advocate the advisability of putting the patients to bed in severe cases and those that do not respond readily to treatment. I also find it useful to have the patient use alternating rooms—one of which can be ventilated while the patient is in the other room. We have found eucalyptus oil of value in some cases. I have also used *cocculus*, *Indicus*, *corallium rubrum* and *ippecac*. *Corallium Rubrum* is a very quickly acting remedy especially in cases that have a good deal of sneezing and nasal trouble.

DR. W. G. DIETZ, Hazelton: Speaking of the prevention of whooping-cough, and especially of its early recognition, I would say that about eight or ten years ago a German writer said that ulceration of the frenum lingua was a characteristic symptom of this disease. He stated that very often you have ulceration and tearing of the ligament under the tongue; and that when you have that, you do not need to look for any other. The earliest symptom by which you can recognize pertussis, and you can do it almost by the end of the first week, and even earlier, is a sudden flush passing over the face of the child during a slight cough. You may say that you get a flushing of the face in any cough; but this flushing is very pronounced. I have never seen this symptom to fail, and think that it is to be relied on.

I am sorry that the paper did not give more indications for homœopathic remedies. I never, in my practice, have used anything else. I do not want to know about bromoform. What the homœopathic remedies cannot do, other remedies can never do. Of course, we all make use of hygienic rules; but take the homœopathic remedies and push them, and you need not look for anything else.

DR. C. S. RAUE, Philadelphia: I enjoyed Dr. Howell's paper very much, and feel like saying "Amen" to everything that he has said. The most important thing of all in the treatment of whooping cough is to keep up the child's nutrition. The suggestion of Dr. Sloan about keeping the patients in bed, if they do not respond to treatment, is excellent; because the strain on the weakened heart produced by these spasms of coughing is terrific. The toxemia has primarily a weakening effect on the heart muscle; and besides, you have a paroxysm of coughing constantly stretching the heart. I have seen dilatations of the heart, produced by whooping cough, persist for a year or two, together with a murmur due to insufficiency or cardiac weakness. These conditions eventually cleared up,

but they showed the damage that had been done to the heart. If kept in bed, the children are less likely to have the severe effects produced on the heart. When there is vomiting, one should put the patients absolutely on a liquid diet. When the child takes food and vomits within ten or fifteen minutes after doing so, it should immediately receive more food. Do not wait for the next two or three hour period to arrive before giving more nourishment, but try to keep up the child's nutrition. An excellent adjuvant to control vomiting and soreness is to put an abdominal belt on the patient. A well-fitting elastic abdominal belt will help immensely. It will cut down the paroxysms of coughing and relieve the vomiting. There is great soreness resulting from the continuous stretching connected with vomiting. The liquid diet, as much rest as possible, the wearing of an elastic belt, and keeping up the nutrition are absolutely to be carried out. The children should be in the fresh air, day and night. If you have to, resort to inhalations, which we have to do sometimes. Instruct the mother to take the child into the bathroom, which has been saturated with the fumes of the antiseptic that you are going to use. After the child has inhaled these fumes for a sufficient length of time, it should be taken into the fresh air in another room. Do not bring a cresoline lamp into the bedroom and let it burn all night. If this is used, it should be used intermittently.

DR. M. YOUNGMAN, Atlantic City, N. J.: I think that the seashore does wonders for patients with whooping cough, and, I might add, everything else. Seriously, I believe that the seashore is an ideal place for the treatment of whooping cough. The place where I live being contiguous to a number of large cities, it is common for people to come there and take cottages because their children have whooping cough. When I am consulted, I advise the parents to take these children to the beach and keep them there as much as they can during the day time, but not to let them play too violently. It has been a very common experience for me to have people tell me that when they have taken their children to the beach, they did not cough at all during the whole day; but that the minute they got back to the house, they began to cough. So long as they were in direct contact with the atmosphere of the ocean, they had no cough.

I think that the course of the disease, also is milder at the seashore.

I want to endorse practically everything that Dr. Howell has said, except with regard to vaccines. I have watched the vaccine treatment of cases of the disease in the hands of some

of my old school confreres, and have tried it myself; and my experience has been that the pain of giving the injections and the tardiness of the result practically rule this method of treatment out. Very few children will submit to it, and very few mothers will subject their children to it. I think one can get along all right with the straight homœopathic remedies, such as *veratrum viride*, *belladonna*, *chininum*, *arsenicum corallium*, *rubrum*, *calcareæ*, etc. The homœopathic remedies, well selected, have for many years done me good service.

I also endorse the wearing of an abdominal belt. It is my common practice to tell the mothers of my patients right away to get a piece of thin muslin, if it is in the summer time, and make a nicely fitting belt for the child. They should put the piece of muslin around the child, and take in some gussets so as to make of it a snugly fitting abdominal binder. It is remarkable what good this will do.

The most important feature of whooping cough is its effect on the heart. It is very difficult to keep the children quiet; but if you could get the full consent of their parents, it might be accomplished. It ought to be done, because the disease is much more serious in its after effects than the laity imagine. The mother is apt to think that the child will get over the disease all right, but you want to look after the heart. You should call the attention of the mother to the puffing of the face that occurs after the children have been coughing for several days. I once said to a woman, "Look at that little girl's face;" and she replied, "I thought she was holding her breath." "Not at all," I responded; "it is caused by the strain on her heart. Listen; and you will hear that the heart skips one beat in every five or ten. The child will be months in getting over this heart-strain after she is practically well of the disease."

Another thing that I should like to mention is that the quarantine ought certainly to be carried out. I think that it is the child that is practically well of the cough, coughing only once in a while, that spreads the disease. When the cough is heard only every two or three days, the mother wants to send the child back to school. One should insist that this be not done. The children are not so likely to give the disease to others in the beginning of the attacks as when they are well. Then is when we want to be careful.

DR. HOWELL, closing: I cannot agree with Dr. Youngman that the greatest spread is at the close of the disease. I believe that it is earlier. Most authorities say that it is in the coughing stage. The germs have been found in the mucus, which

is surely present in the respiratory tract when the inflammation commences. So far as I know from reading and observation, it has been almost impossible to detect the germs in the later stage, when there is only an occasional cough. An occasional cough is very often merely a coughing habit. The disease, I think, is more dangerous to others earlier.

As to the homœopathic remedies, I would say that I did not refer to them to any great extent, because I felt very much like the Irishman did about his whiskey: "Some whiskey may be worse than other whiskey, but there is no bad whiskey." I believe in homœopathic remedies. Some may be better than others, but there are no bad ones.

I want to lay stress on the matter of prevention. Our Chamber of Commerce, at Reading, has had printed a double postcard that any person can get, for reporting a nuisance of any kind. Anyone can send one half of this to the Health officer, and the other half to the Chamber of Commerce, with the complaint stated on it. The person complained of never knows who made the complaint. That plan allows anyone to send in the name of a family containing a suspected case of whooping cough or any other disease, and this case can then be investigated. If the Health Officer find that it is a case of whooping cough, it is quarantined, whether under the care of a physician or not.

THE RELATIONSHIP BETWEEN RHEUMATIC EYE DISEASE AND "SECONDARY" TUBERCULOSIS.—The author calls attention to the fact that the diagnostic test with tuberculin in rheumatic patients with eye trouble produces general reactions strikingly often. He examined a series of twenty-one persons, of whom six had episcleritis, fourteen iridocyclitis and one sclerokeratitis. General examination disclosed the clinical picture of tuberculosis in nine cases of which two showed episcleritis and seven iritis, so that twelve remained in whom no active general tuberculosis could be diagnosed. In eleven of the twelve, tubercle bacilli were demonstrable in the blood. The blood of the twelfth patient was not examined.

Wurtz used the term "secondary" tuberculosis in the sense used by recent investigators, who describe a primary, secondary and tertiary stage of the disease. The primary represents the stage of infection, the secondary, the interval from the first to the tertiary stage, which corresponds to the usual picture of tuberculosis. Wurtz gave his patients "anti-rheumatic" treatment, as his experience with tuberculins has not proven satisfactory. He subjected his patients to cabinet sweats, ten to twenty minutes at a time, this treatment being continued from six to eight weeks after the eye conditions have become normal. He thinks, however, that at times a combination of this treatment with tuberculin may be an advantage. During the sweating, patients are not permitted to be overcome by faintness and are kept in bed. Those of means are sent to a warmer and drier climate during the winter.

EDITORIAL

ORGANIZATION.

At the recent meeting of our State Society, our President, Dr. Ashcraft, in his scholarly address called attention to the great need of reorganization of our Society, in order to further the interest of our School of Medicine. Any argument is needless as to the great importance of our School of Medicine maintaining the form of organization that will best advance the interests of our School and the public: even non-supporters and non-adherents heartily endorse this sentiment in theory, however apathetic and lax they may be in the practical application of it.

In a general way, medical organizations have followed along the lines of Governmental organizations: We have our National and our State organizations fairly well developed; but in a very imperfect manner have we attempted to develop the local unit, the County Medical Society. Within our own State, and indeed most other States, the local County Societies, or the local Societies not organized upon the basis of a County Society, do not properly articulate or bear official relationship to the State Society; nor do our State Societies have the intimate, representative and official relationship to our National organization that they should have.

I fear that the interests of our School have suffered much from the failure to more efficiently organize our own forces. Have not the local medical societies within this State been the result of individual activity in the various communities, rather than the result of following some definite system or plan? I do not recall that our State Society has ever made a serious or sustained effort to make itself a truly representative body. I do not recall that any persistent effort has been made by our State Society to develop the unit of the County Society to its highest efficiency. There are sixty-seven counties in the State of Pennsylvania: in those sixty-seven counties the

Old School has sixty-three "County Medical Societies." In those sixty-seven counties, our School has thirty-eight local medical societies; but of those thirty-eight local medical societies, but eleven are officially organized as "County Medical Societies." Might we not, with profit, follow the basis of organization and government that our Nation regards as best, and the plan which the Old School has demonstrated to most practically fit medical needs?

I am in most hearty accord with the American principle of representative Government: whether that principle be applied politically or medically. The individual medical units should be organized upon the basis of county residence. The various county medical organizations should directly articulate in a representative and responsible capacity with the State Society, and our State Societies should be associated with our National organization in a representative, rather than an incidental manner.

Coming back to the practical and more concrete problem of organization, or re-organization of the forces of our School in this State: can we not, by a concerted effort, affect a re-organization that will be more effective and beneficial to us all? Is it not worth while for the members associated with any of our local societies? Is it not worth while for every graduate of a homœopathic medical college who is practicing in the State of Pennsylvania to consider how *HE* or *SHE* can make our organization more effective?

G. J. P.

THE EPIDEMIC OF FOOT AND MOUTH DISEASE.

DURING the past few weeks the newspapers have contained numerous reports of outbreaks of foot and mouth disease among cattle in various portions of the country and a number of states have been placed under quarantine as far as the shipment of cattle is concerned. This disease is of a highly infectious character and the present epidemic is the most extensive that has ever prevailed in the United States. It occurs chiefly in cattle, sheep, goats and swine, and more rarely in horses, dogs and human beings. Children seem more liable to the disease than adults, the virus being transmitted through

milk of diseased cattle and through butter and cheese made from infected milk.

In animals, the disease usually begins by a febrile rise of temperature and, at the end of two or three days small blisters appear on the mucous membrane of the mouth. These blisters are usually small or may reach the size of a ten cent piece. The contents of the blisters are at first clear but later become cloudy and, after the blisters burst, small painful erosions remain.

About the time of the appearance of the blisters in the mouth, there is usually noticed some tenderness and swelling about the feet. Vesicles appear on the skin and on the feet and the animal becomes lame. In some cases marked evidence of gastro-intestinal inflammation appears, and in almost all cases there is loss of weight due to the fact that it is painful to the animal to eat. The milk is altered in quality and reduced in quantity. Blisters and ulcers may appear on the udder. In the mild form of the disease the death rate is low, recovery taking place in from ten to twenty days. In young animals the disease is more severe, deep ulcerative changes not infrequently taking place in the mouth, in the stomach and in the intestines. Death is common in such cases.

Foot and mouth disease is produced by an ultra microscopic organism, which as yet is invisible and cannot be cultivated. The virus is capable of passing through germ-proof filters and will remain active for several months if kept cool and moist.

The infective agent is present in the contents of the vesicles, in the saliva, in the milk, the urine and the feces. It usually disappears from the discharges after the tenth day, although, it is believed in some instances it may persist for months. The disease is spread by direct contact with the infected animals or through the means of contaminated fodder, drinking troughs, milk or milk products and by contact with the hands and clothes of persons working about the infected animals. From one-third to one-half of all cattle exposed to the disease become sick and the losses to dairymen, from the diminished milk supply and from the death of animals is very great.

As before mentioned, the disease may be transmitted to human beings through the medium of milk and milk products. The patient usually complains of a feverish condition for a day or two followed by digestive disturbances and the appearance of vesicular eruption on the lips and on the mucous

membrane of the mouth. Occasional vesicles will appear on the skin. The course of the disease in the human being is usually favorable, although epidemics have occurred in which the mortality reached eight per cent. Transmission of the disease to human beings can be prevented by the pasteurization of milk and milk products.

G. H. W.

THE TREATMENT OF MYOMA BY THE X-RAY—Haendly has found that in most cases of myoma the patient may be benefitted by the X-ray, and in about 85 per cent. amenorrhoea may be induced. In about 7 per cent. the treatment fails, for reasons which cannot be determined. Small doses act rather as an irritant. The chances of inducing amenorrhoea increase with age from 73 per cent. when the patient is under 40 years of age, to 100 if she is over 50. Recurrence is noted in a small number of cases who may again be benefitted by renewed treatment. Almost all cases of amenorrhoea showed the typical symptoms of the climaxis. These are often the first indications of the effect desired. In one third of the cases the tumor diminished in size, but amenorrhoea may be induced even when the tumor does not diminish in size.

Contraindications for the treatment exist in the case of (1) All tumors where there is the slightest suspicion of malignancy or of the existence of cancer of the corpus. (2) In all myomata which cause pressure symptoms because of their location and size. (3) In all cases where, in addition, ovarian tumors are present. (4) Cases associated with recent inflammatory adnexal disease. (5) In cases of fibroid tumor who have fever, since gangrene may be present; also in cases where a submucous tumor is partly extruded from the uterus. If after two or three months of special X-ray treatment the case is not distinctly improved, the patient should be operated.—*Zeitschr. f. Geb. u. Gyn.* Vol. 73—918.

THE EFFECTS OF CAMPHORATED OIL IN THE PERITONEAL CAVITY.—Kawasoye (Formosa) has studied the effects of injections of camphorated oil in rabbits and found that it produces a reactive peritonitis as described by Hoehne, and may be regarded as a peritonitis due to a foreign body. Three stages of the process may be recognized: 1. The stage of endothelial proliferation and leucocyte infiltration. 2. Fibrin-formation. 3. Organization and absorption of the oil. One per cent. camphorated oil in the quantity of half a centimeter per 100 gms. body weight is not poisonous to the animal. Fat embolism of the lung is not absolutely to be excluded from this amount of oil, which, calculated by weight alone, in a human being of about 130 pounds weight would amount to 300 c.m. Intestinal adhesions following camphorated oil injections were not found after observation of several weeks. The reaction of the peritoneum to camphorated oil varies greatly in different animal species. Even in the same sort of animals the reaction varies. In various parts of the peritoneal serosa the reaction varies in intensity. The peritoneum of rabbits reacts regularly and actively, while in the guinea pig and in white mice the reaction is only slight and irregular.—*Arch. f. Gyn.* Vol. 101—100.

GLEANINGS

OBSERVATIONS ON THE PATHOLOGY AND ETIOLOGY OF DUODENAL ULCER.—This article is based upon the study of forty-one cases found post-mortem. In only six was the condition diagnosed.

1. Duodenal ulcer is a malady of frequent occurrence and one which often passes unrecognized.

2. Although as a rule diagnosed, a chronic duodenal ulcer may occasionally exist and give rise to none of the characteristic symptoms, the first evidence of such a "silent" ulcer being sometimes its perforation.

3. "Silent" duodenal ulcers are met with most frequently in the subjects of arteriosclerosis, and are found for the most part on the posterior wall of the duodenum.

4. Some toxic or irritative factor, usually within the abdomen and most frequently associated with the colon or appendix, is found in a large proportion of cases of chronic duodenal ulcer.

5. Probably many acute duodenal ulcers are primarily follicular ulcers from the breaking down of inflamed lymph follicles.

6. Whatever be the primary cause of a gastric or duodenal ulcer, spasm of the muscular coats of the viscus is an important factor in determining its chronicity.

7. The situation of the opposing ulcers on the anterior and posterior walls of the duodenum on the boundary zone of the areas supplied by the anterior and posterior branches of the supraduodenal artery suggests that a common vascular deficiency rather than a contact infection accounts for the peculiar tendency to chronicity and recurrence.

8. This vascular deficiency may be due to arteriosclerosis, but probably it is usually due to spasm of the muscular coats of the duodenum induced by a slight local anaemia consequent to strain on the supraduodenal vessels, this muscular spasm being favored by the increased vagotonus and the irritable condition of the autonomic nervous system which exists in such cases.

9. The sex incidence of duodenal ulcer is to be explained on anatomical grounds. The relatively high pylorus and short fixed duodenum of the male allows of its vascular supporting ligament, the hepatoduodenal ligament, being exposed to strain, which in the female, with her relatively low pylorus and lax duodenum, is borne by the left border of the gastroduodenal omentum and lesser curvature of the stomach.—*Wilkie, Edinburgh Medical Journal.*

TOXEMIC IRITIS.—Beaumont, in *The British Medical Journal*, mentions the frequency with which iritis is associated with arthritis, or at least with arthritic pains. It is noteworthy, too, that the arthritic and iritic

symptoms are often so accurately coadjusted that exacerbations in the eye and joint frequently recur synchronously. On the other hand, practically never is acute rheumatism coincident with iritis. In the dyscrasia of syphilis and in that of gonorrhea a source of infection is clear and unmistakable. In traumatic iritis, due to a perforating wound, germs obtain direct access to the iris, and even in operating under the strictest asepsis the surgeon's path of incision may become the road of sepsis. Possibly, too, in sympathetic ophthalmitis toxins are elaborated in the exciting eye which have a specific affinity for the iris and other structures of the sympathizing eye. There is an ill-defined type of iritis arising from a dislocated lens in which there is apparently no path of entry for organisms from without. It is noteworthy that the iritis in such cases shows few signs of inflammation, although there are discoloration of the iris and posterior synechiae. Such a low form of infection is probably caused by organisms of attenuated virulence. In diabetes the marked tendency to the dermic formation of boils and carbuncles of obviously infective nature may possibly explain the source of iritis, but on the other hand they may be the coeffects with the iritis of common infection. Iritis, although credited to malaria, is a rare complication in paludal disease, while that which sometimes follows late in cases of herpes of the fifth nerve would seem to be undoubtedly of infective origin. He has seen iritis in association with adiposis dolorosa, but as the patient suffered at the same time from dental sepsis it was probable that the latter was a factor common to both, inasmuch as adiposis dolorosa is due to an inflammation of the fibrous tissue of the panniculus adiposus. Except in sympathetic ophthalmia the iris does not appear to be readily accessible to microbic invasion following injuries of distant parts of the body. Pyorrhea alveolaris is the most frequent source of toxemic iritis, and the reasons would seem to be, first, the great prevalence of pyorrhea, and, secondly, the fact that the infection in these cases is direct into the circulation, whereas in many other forms of alimentary toxemia the toxins undergo the ordeal of the hepatic furnace.—*Charlotte Medical Journal.*

CHRONIC PULMONARY TUBERCULOSIS IN INFANCY AND CHILDHOOD.—Lees (*The British Medical Journal*) describes six areas of dullness over the apices of the upper and lower lobes which he regards as typical of pulmonary involvement. Dullness in these regions is equally typical and constant in infancy, childhood, and adult life, but it is only to be made out by the most painstaking and accurate percussion. Percussion should always be made with the patient in such a position as permits of full muscular relaxation; for the anterior chest the patient should be lying supine, while for the posterior he should be seated with his arms crossed and resting upon his knees. The percussion should be as light as possible, and constitutes the most certain and valuable sign of pulmonary tuberculosis in infants and children, in whom there is no sputum, and who usually show none of the ordinary symptoms of tuberculous pulmonary disease. Valuable aid is rendered by properly taken X-ray photographs, which show small areas of impaired light transmission in the regions found to be dull, as well as fine lines of infiltration radiating from the hilus of the lung. But the X-ray photograph is not delicate enough to detect changes

in the lungs at the very earliest time, when careful percussion will reveal dullness in one or more of the areas in which it is typical of tuberculosis. The finding of this dullness in the presence of bronchitis, or of the pulmonary affections associated with many of the infectious diseases should be regarded as an almost positive indication of tuberculous involvement.—*Charlotte Medical Journal*.

DEAFNESS AFTER NEOSALVARSAN INJECTIONS.—Meneau (*Gaz. hebdom. sc. med. Bord.*) gives an interesting review of reported cases of deafness following neosalvarsan injections. In 1912, J. de Azna reported to the Spanish Society of Dermatology the case of a man of 26 who suffered from acute syphilis and tuberculosis, and who became suddenly deaf on both sides after the third injection of neosalvarsan. The fourth and fifth injection produced some amelioration of the condition and it was concluded that the deafness was a neuro-syphilitic phenomenon, which was cured by a continuation of the treatment. In the same year Sommer Greco laid before the Argentine Dermatological Society the case of a man of 25, who suffered from secondary syphilis and became completely deaf after the fourth injection. Gray reported to the Royal Society of Medicine the case of a secondary syphilitic of 22 who received 0.9 gm. of neosalvarsan, and six weeks afterwards developed deafness on the left side, with facial paralysis on the same side. This was put down to syphilitic disease of the internal ear, with specific localised meningitis or arterial thrombosis. There was no neuritis and no nuclear affection of the seventh nerves. The hearing improved later. It was remarked in the discussion following Gray's paper that such deafness had never been noticed before the days of salvarsan.

TREATMENT OF DIABETES WITH GOUT.—Von Noorden calls attention to the fact that diabetes is often complicated with gout and that if the diet indicated in both conditions is observed, there would be little left for the patients to eat. Fortunately, the combination of severe diabetes with severe gout is not common. Thus in the last twenty years, the author has seen less than a dozen cases. The rule is that the gout runs a mild, intermittent course and slowly disappears, while the diabetes is slowly progressive. A more serious feature, however, is the more pronounced tendency to complications, particularly affections of the heart, vessels, kidneys and eyes, and neuralgia and neuritis. The latter two are especially common and may be due both to the excess of uric acid and the excess of sugar in the blood and hence are especially severe if both these substances are present in the blood in undue amounts. As a rule, the gouty condition will be treated first with hot baths, hot packs, massage, electricity, hot air, light baths and other physical procedures; with salicylates, phenacetin and atophan and with a milk, egg, vegetable and fruit diet. Most physicians also instruct the patients to avoid dark meat and partake only of white meat. The author believes that it is much better to direct the treatment of these cases toward the diabetes, but at the same time to reduce the meat and to forbid altogether the alcohol and the internal organs, such as liver, sweet-breads, kidney and spleen. The glycosuria will rapidly disappear though the hyperglycemia will often persist much longer than in simple cases of

diabetes. The neuralgia and neuritis can be checked in this way much more rapidly than by the other treatment. There is little danger that the gouty symptoms will increase or that nephritis, if present, will become worse. Later, the tolerance of the patient toward carbohydrates will be better and a less restricted diet will serve to keep the sugar out of the urine. More attention can then be paid to the gout. Thus, every two months, a purin-free is to be followed for about two weeks and during this time, the amount of carbohydrates is increased. When both affections are very severe an antidiabetic diet is alternated with an antigout diet every two weeks. It is also important to remember that these patients do not tolerate the colchicum preparations.—*Therap. Monatshefte.*

CAN THE MEASLES GERM LIVE A LONG TIME?—The following case is very conclusive. It concerns a lady 30 years old, four months pregnant. Her first child, 6 years old, contracted measles, complicated with bronchopneumonia, and died. After the death of her child, the lady, previously hysterical, was taken with a severe nervous trouble and compelled to leave her home and go to the country. Before going she packed in a box all the child's toys. When seven months pregnant her nervous condition demanded a premature delivery, and she was sent to a special clinic, where there was no measles and had not been any case of measles nor any other infectious diseases. After twenty days her condition improved so much as to feel herself again.

From the time that her ailment commenced she was isolated with her maid, and never received anybody. One day she opened the box of toys of her dead boy. A week after I was called to see her. She had a cold with slight fever. The fever continued until Koplik's sign appeared and the eruption of measles, which was complicated with a very severe bronchitis. The patient recovered.

I report this interesting case because the pathogenic cause of measles can persist many months. In fact, during the three months' absence of my patient, her house was hermetically closed, and from careful inquiries I was assured that nobody had entered it. We are, therefore, compelled to admit that my patient was infected by handling the toys of her boy who had died of measles.—*Le Progrès Medical.*

MODERN WAR SURGERY.—Fraenkel states that primary infection of gunshot wounds, due to tetanus bacillus, is seen in war as in peace. It is remarkable that so little of it is seen on the battlefield, as here there is more likely to be contamination with the soil, manure, etc. It is hard to determine which are clean wounds, or which are infected from the beginning, as by the time they reach the hospital they may have traveled several days, at times without being bandaged, and may have been exposed to all sorts of infection. The great majority of these cases clear up under antiseptic treatment and the results are indeed gratifying. Pneumothorax may develop with very little local or general disturbance. Gunshot wounds of the abdomen seem to do best if not operated on at once, but if allowed to wait until a circumscribed abscess forms. On the other hand, gunshot wounds of the brain should receive early attention. Holbeck is of the opinion that tangential gunshot wounds of the skull should

be operated on as soon as possible. In his work on this subject, the result of observations during the Russo-Japanese war, he points out that in cases that were operated on early, the mortality was only fourteen per cent., while those that were operated on later showed a mortality of forty-nine per cent. The cases that were operated on early had the advantage of having to be transported only a short distance and then remained for a long time in a hospital. He thinks, however, that even if the cases were allowed to remain quietly in a hospital for some time and were operated on later, the results would not be so good. Early in 1913, the author reported four cases of tangential wounds of the skull which he had operated on after they had been lying on the battlefield for at least twenty-four hours and had made a three-day trip to the hospital. All of the four cases resulted in cures. He had occasion to witness an autopsy performed in a case in which a prophylactic operation had been done. The autopsy showed a diffuse purulent meningitis originating from the wound made at the time of operation and on the opposite side of the brain there was an encapsulated hematoma which showed beginning infection, the results of the prophylactic operation. In view of these facts no rule can be laid down as to primary and secondary operations and every case has to be decided for itself. As a result of his observations he concludes that the present war has taught us nothing new in war surgery and that probably the best plan is to interfere as little as possible.—*Wiener Klinische Wochenschrift*.

ISOLATION AND QUARANTINE PERIODS IN THE MORE COMMON INFECTIOUS DISEASES.—*Scarlet Fever*.—The normal minimum isolation recommended for this disease is six weeks—a period which may be either much too short or unnecessarily long, according to the condition of the individual case. The question of detention resolves itself into the question, Is desquamation infectious? a fact by no means proven. Priestley discharged from the hospital 120 desquamating children without causing a single secondary case. Others have adopted four instead of six weeks as the minimum period of detention in the hospital without increasing the return case rate. Ker believes that the adoption of five instead of six weeks as the minimum period of isolation would be a great step in advance. He considers seven days an ample period of quarantine for contacts.

Diphtheria.—Patients should be isolated until the necessary negative cultures have been obtained. Quarantine is unnecessary for perfectly well contacts who have given two successive negative cultures within three or four days.

Measles.—The usual isolation period for measles is two weeks from the appearance of the rash. In hospital outbreaks, however, measles patients are regarded as free from infection as soon as the rash has disappeared. The quarantine period of measles in hospital outbreaks is fifteen days; eight days may be regarded as a minimum, and nine or ten days more frequently from the probable moment of infection to the occurrence of the first symptom, and from thirteen to fifteen days to the appearance of the rash. Eberstaller at Graz allows contacts to attend school for eight days and closes the infected class from the ninth to the fourteenth day.

Rubella.—The period of detention for rubella is ten days. Netter and several other French authors, however, hold that a case is no longer in-

fectious after the disappearance of the eruption. The incubation period is from twelve to twenty days. Contacts may safely attend school for eight or nine days after exposure and thereafter should be excluded until the twenty-first day is past.

Whooping-Cough.—Ker has the gravest doubts as to the infectivity of whooping-cough when the paroxysmal stage has fully developed, and considers that, in favorable circumstances and with otherwise healthy children, isolation is unnecessary after the paroxysmal stage has lasted for a week or ten days.

Chicken-Pox.—Ker believes a patient to be infectious until the last crust has separated. As regards quarantine, contacts are allowed to mix with other children up to the eleventh day, when they are isolated until the twenty-second. School attendance can safely be allowed for ten days from the first exposure, and be resumed after three weeks from the last contact with the patient.

Mumps.—The usual isolation period for mumps is three weeks, but Ker has never seen harm result from allowing patients out of isolation when a full week has elapsed after the disappearance of swelling. Exclusion of contacts from the thirteenth to the twenty-sixth day from the date of the first and last exposure respectively would be a safe rule for schools to adopt.—Ker, in *Edinburgh Medical Journal*.

THE INFECTION OF CHILDREN WITH THE BOVINE TUBERCLE BACILLUS.—Mitchell states that twenty-four of seventy-two cases with tuberculous cervical glands were under three years of age. Of these twenty-four, only two were proven to be of the human type; the rest were all bovine. Eighty-four per cent. of the children thus afflicted two years of age had been fed from birth on unsterilized cows' milk, and in only three cases was a history of tuberculosis in the family.

The author states that cows not having tuberculosis of the udder may readily transmit the tubercle bacillus in the milk. He emphasizes the extreme importance of adequate dairy inspection and the taking of the tuberculosis cows out of the herds, as one tuberculous cow may readily infect the milk of a good sized herd.

The relation between the channels of infection and the group of glands involved is discussed. He says the more frequent involvement of the glands in front of the sternomastoid muscle in the upper carotid region is strongly suggestive of the faucial tonsils being more often a source of infection than the adenoids. He investigated the faucial tonsils in 64 consecutive cases of children suffering from tuberculous disease of the upper deep cervical glands. Twenty-four of these cases showed histological evidence of tuberculosis in the tonsils, but no clinical signs were present.

The chief sites for tuberculous lesions in the tonsil are in the deeper parts of the crypts, especially the supratonsillar group, or immediately under the mucous membrane near the mouths of the crypts, or deep in the tonsil close to the posterior capsule. He concludes that cows' milk containing bovine tubercle bacilli is clearly the cause of 90 per cent. of the cases of tuberculosis cervical glands in infants and children residing in Edinburgh and the surrounding district.—*British Medical Journal*.

Monthly Retrospect

OF HOMOEOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

CROCUS SATIVUS.—Very changeable temperament. Sensation of hopping and jumping as from something alive (abdomen and chest). Bleeding from various organs of the body; the blood is black and tough. Tingling in various parts of the body. St. Vitus dance. Skin scarlet red. In the open air a better feeling than in a room, even moderately warm. With crocus, there is an aggravation in the morning, from fasting, and in a warm room. Amelioration is seen in the open air.—*Manuscripts of Adolphus von Lippe.*

CROTON TIGLIUM.—Burning (nose, mouth, pharynx, fauces, intestinal canal). Violent purging with constrictive sensation and occasional stitches at the anus. Hoarseness with hollow voice which constantly obliges him to hawk. Amelioration after sleep.—*Manuscripts of Adolphus von Lippe.*

CANTHARIDES.—Violent burning with soreness in all parts of the body, especially in the cavities. Sensation of cutting in the inner parts. Sensation of dryness in the joints. Tearing and stinging from without to within. Tetanic spasms compelling to bend forward or backward. Retention of urine with spasmodic pain in the bladder. Debility bordering on paralysis. Voice low. Pricking in inner parts. Satyriasis. Aggravation from coffee, during and after micturition.—*Manuscripts of Adolphus von Lippe.*

CAPSICUM.—Homesickness with redness of cheeks and sleeplessness, Phlegmatic temperament, and laxness of the muscles. Tendency to get fat. Stiffness and painfulness of the joints while beginning to move. Crackling of joints. Cough with pain far from the chest. Tearing drawing from above downward. Stools of bloody mucus with tenesmus, burning of the anus, worse at night. Aggravation in the evening, after eating and drinking, and when beginning to move. Amelioration after having moved about for some time.—*Manuscripts of Adolphus von Lippe.*

CAPPARIS CORIACEA.—The proving of this drug suggests its use in polyuria, amygdalitis, mucus diarrhea, coryza with fever, and glandular affections.—*Review of Homœopathic Medicine and the Natural Sciences.*

INDIFFERENT HEMICRANIA IGNATIA.—Sensation as if a nail were driven into the brain (clou hystérique) ameliorated by resting the head in lying. Headaches induced by mental activity, by the emotions, and by violent

odors, etc. The crisis ends by vomiting. A good indication of *ignatia* is that type of cephalalgia returning every two days. Sometimes the headache of the drug is of a pulsatile character: worse in the eyes and around the eyebrows and at the root of the nose, ameliorated by movement in postural change, and by inclining the head forward. An abundant limpid urination will terminate the crisis and this occasions a ready relief.

NUX VOMICA.—This remedy is called for in lancinating and pressive hemicrania, commencing early and gradually becoming worse in intensity up to a point where the patient is driven nearly distracted. The migraine comes on after exaggerated mental application, it starts in the morning, augments gradually and diminishes towards evening, and is seen in those people of a sedentary habit. These individuals have a bitter taste in the mouth and the tongue is quite furred. Some vertigo may be present. Often there is associated vomiting and Dr. Vannier considers this to be most frequently of a violent and expulsive nature. Typally, there is aggravation by the light, by noise, by coffee and in the open air.

RIGHT HEMICRANIA IRIS.—The attack commences in the right side, preceded by limes before the eyes. The nausea and vomiting is very intense. Sour vomitings. Iris is most applicable to that form of migraine denominated gastro-hepatic. When the migraine is at its height, the bitter vomitings come about and always unexpectedly. Migraine by mental exhaustion, which is aggravated by rest, and ameliorated by movement of a continuous or moderated character. These states most frequently apparent in those of studious bent.

PLATINA.—Right side most often involved. Constriction at the level of the forehead and of the temple of the right side. Aggravated by resting on the left side. Ameliorated by the open air.

PULSATILLA.—Right sided Involvement. Frontal or supra-orbital headache commencing on the right temple, with lacrymation on the affected side, nausea, vomiting. The aggravating modalities are: heat, the evening and mental exercise, while the ameliorating ones are the open air, the night and the cold.

SANGUINARIA.—The characteristics here are the following: Afflux of blood to the head, weakness and nausea, and vomiting. The temporal veins are distended, and the pains commence in the occiput and there is a localization of the trouble in the right eye. There is an aggravation by noise, the light and by odors. There is an amelioration by shading. The attack frequently terminates by an abundant flow of urine. Dr. Vannier considers *sanguinaria* to be of approved value in menstrual migraine associated with abundant flux. Useful in hemicrania of the climacteric as well.

SILICEA.—Headache from nervous exhaustion, pain comes from the nuqual region and extends to the right supra-orbital area; from the occiput to the ocular globe which is very painful. There is an aggravation by mental exercise and an amelioration by warmth.

LEFT HEMICRANIA. ONOSMODIUM.—Useful in headache resulting from ocular fatigue and from sexual excess. There is a left-sided aggravation. The head is dull and the patient complains of vertigo.

SELENIUM.—A useful remedy in overcoming ill effects from the use of tea, antidotal in this respect. The headache of selenium is a nervous affection. There is a left ocular localization with it. The headache is periodic in character.

SPIGELIA.—Early morning headache, recurring each day, growing worse toward noon, and later diminishing with the approach of evening. It is frontal and temporal with acute pains involving the left eye.—*Dr. Leon Vannier, L'Homœopathie Française.*

VANADIUM (The Metal).—In Dr. William W. Steele's service at the Hahnemann Hospital the use of this remedy has been of approved valuation in anorexia and symptoms of gastro-intestinal irritation. It has proved of distinct value in anemic and emaciated conditions where the patient was also laboring under the disability of a dry, irritating and paroxysmal cough. It seems to act as a tonic to digestive function. Dr. Steele uses same in the 6thx.

LYCOPODIUM IN PNEUMONIA.—Dr. Wm. H. Yeager is of opinion that lycopodium is of great service in cases of pneumonia where great dyspnea is an outstanding feature in the case. To be effective one must predicate, in other words, a struggle on the part of the patient. Dr. Lippe considered "a playing of the alae nasae" of primal importance and his suggestion is of marked value. "The mucous rattle" is another indication for the use of lycopodium in cases of pneumonia. Lycopodium, or the club moss, contains a large amount of sulphur, and this undoubtedly accounts in large measure for the very wide sphere of usefulness of the drug.

CHOREIFORM MANIFESTATIONS IN POLIOMYELITIS.—At the recent French Congress of Pediatricists Netter and Ribadeau-Dumas reported the case of a six-months-old-infant who presented the following manifestations of poliomyelitis: Paralysis of both legs, one arm, and the upper part of the other arm; nystagmus, choreic movements of the facial muscles, and protraction of the tongue. Lumbar puncture showed a lymphocytosis. The infant died in the course of a complicating broncho-pneumonia. Autopsy showed the characteristic lesions of poliomyelitis. Choreiform movements are frequently observed in the course of experimental poliomyelitis in the monkey, but are exceptional in the human cases.—*La Presse Médicale.*

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BUREAU OF SANITARY SCIENCE

MENTAL HYGIENE AND ITS RELATION TO PUBLIC MEDICINE.

BY

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THE proverbs of every race and country are a national possession,—the heritage of succeeding generations. The more fallacious are quoted on all sides with apparent reverence,—others containing germs of truth are neglected. Of such a kind is the maxim that "Prevention is better than Cure." It is on every one's lips almost from childhood,—but its principle (remarkably true), is ignored by all sorts and conditions, the rich and the poor, the educated and the ignorant.

The truth of the principle that "prevention is better than cure" is appreciated only in the face of actual and imminent danger, such as the outbreak of a contagious or infectious disease. In such an emergency nothing is left undone, no expedient is left untried; the preventive measures adopted may even savor of extravagance, but the crisis weathered, our national lethargy resumes its sway. Public opinion must

first be impressed by solid argument based on substantial facts and common sense,—then progress may be expected.

Modern sanitary science has abolished yellow fever in Cuba, discovered the cause and largely controlled the ravages of hook-worm anæmia in Porto Rico, barred yellow fever and malignant malaria (commonly called Chagres Fever) from the Canal Zone, isolated leprosy in Hawaii and the Philippines, and aided in the investigation of "Beriberi,"—(a disease due to the use of polished rice as a food.) This work, as you all are aware, has revolutionized conditions in our tropical possessions.

Modern sanitary methods, backed up by intelligent and authoritative administration, have indeed worked wonders in the tropics: but what of our own country? Tuberculosis, pneumonia, and the appalling black plague of venereal infection still lay waste to the land. They are tolerated chiefly because we are accustomed to their presence. If tuberculosis were a newly-discovered tropical disease, if typhoid fever were limited to the tropics, how horrified we would be at their ravages, and how warmly we would applaud any efforts of the national government to control them. But through long association, we have become tolerant of their presence and reconciled to their destructiveness. Yet modern sanitation, if permitted, can effect as marvelous changes here as in the Canal Zone or in Havana. The value of typhoid vaccine as a preventive measure against typhoid fever has been demonstrated conclusively and on a large scale during mobilization of armies both in this country and abroad.

The ready response of the public of late years to better health conditions is a most gratifying result of the rapid change of public opinion on health matters. The people are ready for most reforms. One of these is the recent remarkable and favorable view of public opinion on the common drinking-cup: another, is the equally rapid progress of the campaign against insect-carriers of disease, and especially of flies. If any one had predicted a decade ago, that American newspapers and civic organizations would inaugurate a definite campaign against flies, he would have been regarded as hopelessly visionary.

The question I desire to present for consideration is,—that mental science should become a part of public medicine; should take its place with chemistry, with biology, the study of

infectious diseases of all sorts, the study of air and water, and all those things which conduce to human life and health. There is no doubt that the community in general have not realized what the department of medicine might possibly do to help them. The criticism has been advanced, that the inclusion of mental diseases in public or preventive medicine is impracticable, because no exact and definite procedure is possible, whereas infectious and contagious diseases present an exact etiology capable of being scientifically demonstrated in the laboratory. That these diseases are communicable by the transmission of actual bacteria from person to person, is admitted without controversy. Boards of Health have therefore a positive duty and definite procedure indicated, so that this department of medicine has been reduced to an exact science. It is affirmed that mental disease presents no such conditions as the foregoing, and therefore there is no occasion for interference by Boards of Health. While the subject presents difficulties, I believe we have reached a point where something definite should be done. Slowly at first, but surely, ways and means can be suggested of enlightening the public mind as to the preventable causes of mental disease. In this way, much may be done,—and in the future there must come some good results. The public (and more particularly that part of the medical profession not directly interested in the subject of mental disease), have remained too long uninformed on the question of insanity. The medical profession should not only advocate the enlightenment of the public concerning the cause and prevention of mental disease, but should impress upon Boards of Health the importance of observing certain laws of mental hygiene in the home and school. The duty of the physician to the community is an active element in life today,—and it is one, the value of which is being more and more appreciated. By “Physician” I have special reference to the family physician, or general practitioner, who should become so familiar with the antecedents of insanity, that he can use his influence in correcting and diverting its evil tendencies.

Psychiatry is no longer a circumscribed field. Neurology, Psychology and Sociology are now closely related with Psychiatry. It is the imperative duty of the general practitioner to unite for joint discussion and research with the neurologist, psychologist, sociologist and psychiatrist.

Modern science is now teaching us that if we wish to

eradicate the ailments of old age and restore the buoyant health of youth, we must diligently conserve the health of the child, if it is to be enjoyed in later-life. We realize that the child as an individual, has been ignored,—but in the education of the future, he must be recognized. We should therefore concern ourselves chiefly with questions of education, especially the formation of stable mental habits and the foundation of character. Why? “Because in the child lies the hope of each succeeding generation of society; the cradle of the little child is the cradle of the race.” The benefits of proper training in childhood are certain and far-reaching. In order to achieve lasting results the work of prevention must be undertaken during the period of educability,—before settled habits have been formed. Therefore such work must be chiefly educational in character. The foundations of most physical and mental disorders are laid in childhood and adolescence; neuropathic and psychopathic constitutions are seen earlier in life than formerly because of faulty management of body and mind during the period of infancy and childhood. So keenly has this become realized by psychologists and educators, that “child study” has become a special department of the curriculum: much has been learned and yet remains to be learned from the study of the child which has a practical bearing upon normal and abnormal psychology.”

A great deal has been accomplished in this direction through school hygiene and the enactment of laws requiring medical inspection of schools. Much is being accomplished by the medical inspectors in the schools who look after ears, eyes, teeth, throat, chest and all that pertains to the physical make-up of the child. Such inspectors should acquaint themselves with mental disease, so as to enable them to recognize danger symptoms in the child. If anything is to be accomplished in the way of prevention of insanity, it must be largely with the children.

Until within recent years, children in the schools have been treated equally: the precocious, as well as the retarded child, received the same treatment regardless of the mental endowment or physical condition.

At the present time in certain of our large cities, a number of instances have been reported where special attention and training (under the supervision of teachers adapted for the work), has improved the progress of backward and retarded

children seemingly doomed to spend their lives eventually in an institution.

The study of defectives and failures has revealed the fact, that certain persons are adequately endowed for small demands, but are bound to fail under an excessive demand. This teaches us that if the defective, such as the backward and retarded child and possibly the imbecile, can reach his level,—there is comparatively little danger of further complication. Where nature is not kind enough to take away the temptations and ambitions, as well as the capability for a successful adjustment, it is our duty to find the proper level for the child.

"How often the patients' histories show that their education has failed in not stimulating natural aptitudes for any particular vocation, and the child as it grew up did not acquire a purpose for its life, or did not find its natural level,—because the education while at school was such as to only arouse inordinate ambitions which could never be attained under the circumstances. Not that ambition is a bad thing, but that failure to see a purpose and a relation to all other phases of life in the "daily round and the common task" is a serious detriment to happiness, and tends to repress and ultimately extinguish the inspiration of a high ideal, and a sincere interest in the simple things which make character great and noble because simple."

The psychology of the "misfit" is most instructive. To "educate" means to "lead out,"—but alas! too often a system which represses, or fails to cultivate natural tendencies for a useful and beneficial end, is substituted. Here, as in many other directions, the little child should lead us, we taking our cue from him, and not forcing our imperfect and misconstrued stock of worldly wisdom upon his so sensitive nature, to the crushing point of any originality. To teach the child how to use his mind healthfully would seem to be of more importance than to attempt to store it with second-hand furniture in the form of abstract knowledge which cannot be applied in the ethical relation between himself and his fellows, the disturbance of which is the root of unhappiness.

At this point I want to call attention to the work of Prof. Witmer of the University of Pennsylvania,—Department of Psychology,—who has established a clinic called the "Psychological Clinic," wherein he conducts clinical studies of the abnormal child. He studies the child as an individual, working

out the mental inadequacies and suggesting individual training to meet the deficiencies. To my mind, this is one of the most promising fields in preventive medicine as applied to mental and nervous diseases. Applied psychology is measuring the capacity and suggesting the needs of the child.

To minister to a mind diseased, is not perhaps the daily routine of the general practitioner, but he will find many incipient cases in his daily rounds,—the progress of which he can arrest, and the responsibility rests upon him to do so. The family physician is in a position to note any departure from normal mental health. He has the opportunity to check its progress and give sound advice. In these days when our social and economic systems are disturbed by disorganizing factors, industrial upheavals, and strenuous competition between those well and those poorly equipped for the struggle,—a large number of old and young are to be found on the verge of physical and mental breakdown. They dare not give in, for the pace has been set, and every nerve has been strained to respond. Many persons have so small a reserve stock of brain power that it is soon exhausted, and the power of self-control and responsibility is lost. The condition called irritability usually means a diminished power of self-control, and it accompanies bodily and nervous weakness.

The laborer, workers in the factory and in the slums, (in their ignorance of the laws of nature), the professional man (overconfident in his intellectual powers and well-ordered nervous system), the lad at school (weighed down by too close application and not enough open air exercise), the sly, retiring boy with a "shut-in" personality (just yielding to evil inclinations), the worried business man and father (bearing the heavy load and seeing no way of lightening it),—all these subjects are very near the borderland of mental affection, and this is the time when proper medical advice would avert disaster. This is the period of initiation and incubation. These are some of the varieties of ailment developing mental disease, which present a golden opportunity to the physician. These various conditions are not relieved by moral lectures, but in some instances by a few days' rest in bed with good feeding; others, by a change of scene (with freedom from household or business cares) which should not consist in constant travel. By so doing, much discord would be avoided,—the husband or wife becoming fractious and irritable as a result of ill

health or overstrain,—the school-boy as well as the adolescent will realize the importance of early treatment and thus escape a mental breakdown.

In the education of the laity, proper treatises on mental hygiene should prove helpful. Dr. Clouston's book on the "Hygiene of the Mind" is an able and practical treatise. It can be readily understood and appreciated by the layman, and it is interesting as well as fascinating reading for the physician. If mental hygiene were made an important part of the public school course, especially in the High School,—there would doubtless be fewer collapses at the critical periods of life. Such a treatise as the one cited (or something similar) should be closely studied and taught by our school teachers and professors. I have had cases in consultation and under observation, which have developed in schools under the eye of teachers who were blind to symptoms which would have been apparent to the merest tyro in mental disease. Education as a training of body and mind for systematic orderly living is what is needed. Hence the first requisite in any attempt to arrest the development of the neuropath into the psychopath, should be the careful supervision of all scholars in the public schools,—(preferably by one who has had training in mental disease). The medical inspector should consult with teachers and make suggestions to them respecting scholars requiring special care. The teacher should report to him scholars who attract attention by reason of any abnormal conduct, especially those known as repeaters, also backward and retarded children.

Let me repeat, if we are to accomplish anything in the way of prevention of insanity, it must be largely with the children, as when the different stages of life advance, individual habits are formed that cannot always be controlled in active life, and if mental disease develops, the case becomes more complicated. If we look at it from every point of view, we must admit that there is no disease which is more dreadful and at the same time more far-reaching in its relation and consequences. As if this were not enough in itself, it has been invested in the public mind with many needless terrors and misconceptions because of the extreme popular ignorance that prevails regarding its true nature and extent.

We often find that patients have never been trained to adequately adapt themselves to the variations of environment consequent upon modern life, to adapt themselves to misfor-

tune and all that term embraces,—to bring themselves to a correct understanding of their ethical relation to their fellows, or to bring their emotions under the cooling survey of their intellect, and thus analyze themselves before taking a blind course on a sea of troubles. Whatever moral instruction they have had, has not been such as to serve them in the hour of need; but has been a thing apart from the common-place duties of daily life and they are unable to bring it to bear upon the day's work. They cannot think sanely because they never learned how.

There are various conceptions at the present time in regard to the causation of certain mental disorders. There are those who advocate the theory of auto-intoxication; those who base their opinions not merely on a study of the symptoms of the disorder, but also on a careful analysis of the whole life history of the patient, believing that it is a culmination of a long period of bad mental hygiene,—as for example, the disorder may seem to come out of a blue sky, but careful investigation enables one to see in it, the culmination of a long period, as stated, of bad mental hygiene. On the surface the individual may have met the demands of daily life sufficiently well to avoid the special notice of his friends and relatives, but beneath the surface, mental life is found to have been far from smooth. Instead of facing squarely the difficulties of life and of their own constitution, these individuals have been prone to indulge in unhealthy substitutes for normal reactions: similarly, instead of being frank in other directions, they are apt to brood over their troubles, to see meanings that are not intended, to neglect the ordinary balancing factors of a healthy life. Beneath their ordinary daily activity, there is usually a variety of internal discrepancies, quite incompatible with that feeling of satisfaction which goes with good bodily and mental health. Such individuals are usually designated as having what is called a "shut-in personality."

Dr. Adolph Meyer frequently found that the patient was habitually dreamy, dependent in his adjustment to the situation of the world, rather on shirking than on active, aggressive management. It is frequently difficult to trace the development of the case. The patient has not as a rule, talked frankly over those very difficulties, which are most important; the symptoms of the disorder itself after their development, those very diffi-

culties, frequently exclude any satisfactory co-operation on the part of the patient.

When we understand better the development of certain cases and forms of insanity, the soil upon which it is most likely to arise, the educational and social factors which appear to influence it, the nature of the troubles which seem to precipitate it, the physical disorders which accompany it,—we shall perhaps be able to aid more effectually in the development of those individuals who give evidence of unfortunate constitutional traits, and be able to contribute more guidance towards the mental health of the community.

We must not, however, eliminate such important subjects as matters of marriage, heredity, alcohol, syphilis and environment, all of which are of great importance, as they are preventable and removable. Just how preventive medicine should deal with mental disease, is too exhaustive a subject for detailed consideration. I can say, if the knowledge of such subjects as these last mentioned are widely spread among people, definite results might be accomplished.

An encouraging movement of late years has been the helpful work that is being so enthusiastically carried on by the social service departments that have been, and are being organized in large centres, in connection with general hospitals and is being started in our State hospitals; another is the enactment of laws in certain states regulating marriage and asexualization, to prevent the reproduction of their kind,—such as habitual criminals, feeble-minded, and other undesirable persons who have fallen into the hands of the State, as well as mentally unbalanced persons with persistent perverted sexual manifestations.

I believe the time has come, when the medical profession within the proprieties of ethics, and perhaps law-makers and sociologists, should take up more seriously, the question of venereal diseases, and institute a general educational campaign and preventive measures against their spread. Syphilitic infection is responsible (directly or indirectly) for quite a proportion of idiocy, imbecility, dementia, epilepsy, mental and nervous diseases, etc. Certainly it is the prime cause of most cases of that degenerating and incurable disease, general paresis,—which has so far baffled science, though recent investigations have probably made some advance. On account of the insidious and disastrous effects of syphilis (not only on the primarily infected individual, but on his progeny), the medical

profession should take the lead, and all intelligent people should support efforts to stop its dissemination and bring about as far as possible, its extinction. It would not be an unjust abridgment of personal liberty, and would surely be for the general good, to apply under medical advice and sanction, to primary syphilis, some adequate system of quarantine.

The medical profession may take a proper pride in being the pioneers in the movement for preventing social evils, especially when it is obvious that such effort has a tendency to diminish the material rewards of the profession, and eventually to put the "physician," as we now understand that title, out of business altogether.

In conclusion, let me say that if we would attain a broader knowledge of the causes, the nature and the prevention, the most enlightened treatment of insanity and the consequent results, there must be a more general awakening of interest and a greater sense of responsibility on the part of the members of the medical profession, legislators, the heads of families, school-teachers, and all others who have an interest in public welfare. Let the people understand that it is to *prevention* rather than cure, that we must look to the stopping of the development and the increase of mental diseases, degeneracy, and the consequent crowding of our institutions with ruined minds.

As a preventive measure against the future development of the psychoses and neuroses, more attention should be paid to scientific examination, proper physical training, sufficient rest and recreation, as well as to the avoidance of worry and emotional disturbances of school children, those who work in factories, and all youths about the age of puberty. Our educational systems, no less than parents, have been woefully negligent along these lines. There is too much over-mental and under-physical development of children. If mental and physical hygiene were made an important part of the public school course, there would doubtless be fewer collapses at the critical periods of life.

Prophylaxis may be said to be the watch-word of the present age, the essence of the scientific spirit as manifested in the higher departments of science which have to do with the social welfare of humanity,—the science most worth while. We see this spirit at work in the efforts made for the prevention of crime and delinquency by means of juvenile courts, in which

the official on the bench relinquishes his terrifying dignity and becomes the paternal and kindly adviser of the delinquent: by means of the probationary system, through which the individual case is kept under wise and close personal supervision until out of danger; and by means of vocational training to suit individual capacity and aptitude, in trade schools and reforming institutions.

Let me impress upon you that in ever-increasing quantities in every great city of the civilized world, there comes to the police courts day after day, the same grist of sordid poverty, petty crime, drunkenness, prostitution, misery, and disease,—physical, mental and moral.

Few intelligent observers who are brought into intimate contact with the lower criminal courts will deny, that a very large number of the cases coming before these tribunals are more fit for physicians and medical treatment than for judges and prison sentences.

The physician of today to be successful, must look out upon a broader horizon, and be willing to take active part in preventive medicine,—and it seems to me one of the most important is that of mental disease.

Finally, I desire to point out two facts,—namely, that insanity is very common, at least one per cent. of the population being either insane or congenitally defective; that according to some authorities it is apparently increasing at a rate which is about twice as great as the rate of increase of the general population.

We therefore should become interested not only in the diseases which kill, but in those which result in the impairment of the worker, and the usefulness and pleasures of life as well.

There is a well-organized endeavor to reduce the alarming amount of mental impairment in the United States through the Mental Hygiene movement. This is being advanced and directed by the National Committee of Mental Hygiene. It includes not only a nation-wide campaign of education, but also preventive social service with individuals threatened with mental breakdown, and a medical survey of institutions caring for the insane in this country.

**THE WORK OF THE STATE DEPARTMENT OF HEALTH IN PENNSYLVANIA
WITH A RESUME OF ITS MOST STRIKING RESULTS.**

BY

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DEPARTMENT OF HEALTH.**

Address delivered before the Homœopathic Medical Society of the State
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IN order that we may present a resume of the Department's various activities and give you some idea of the results that have been obtained in public health work in Pennsylvania within recent years, it will be necessary to refer briefly to the laws under which the Department has been organized and to discuss for a few minutes the general plan of the Department's organization, the relation of the various sub-divisions of the Department to the chief officer, the Commissioner of Health, and the relations of the various sub-divisions of the Department to each other. It will be well also to refer briefly to the general scheme of the whole organization and to discuss the aims and objects of the executive officer and his various assistants.

Public health work is educational in every phase and the educational work must always precede the enforcement of the laws which are amply backed by police powers. The central theme running through the whole of the Department of Health and through each sub-division of it is, first, to keep close to the public and to lead them to see the necessity for restrictions and regulations before attempting to enforce them.

The present State Department of Health was organized in 1905 with these objects in view and with the thought that Pennsylvania citizens want to be kept in good health and are willing to listen to all reasonable efforts and to submit to reasonable restrictions that are aimed toward protecting their health. From the earliest days of this organization, the great press of the commonwealth, some nine hundred publications in all, have responded to every call from the executive officer and have carried messages of health and prolonged life to every fireside in the commonwealth. Civic Clubs, labor organizations, charitable and philanthropic societies have been con-

stantly and effectively passing along every helpful message that has been promulgated. An enormous amount of assistance has been rendered by the clergy through the pulpit and church organizations. Useful lessons have been impressed with the travelling exhibits and popular lectures, the distribution of leaflets along public health lines, household circulars handed in where quarantine has been established, educational interviews through lay journals, and the instruction by every physician at the bedside have supplemented the Department's work everywhere. These lessons to Pennsylvania citizens week in and week out every day and all the time have been responsible for a greater amount of public health education in the period of nine years in Pennsylvania than have been accomplished by all lines of public health endeavor in the many years of ineffectual public health work prior to 1905, and by reason of all this public health education made it possible to get support from citizens and financial assistance of the Legislature for the executive side of the work and the enforcement of law.

Prior to the Act of June 3d, 1885, public health work in this commonwealth was limited to measures of quarantine at the Port of Philadelphia and to spasmodic quarantine in certain of the other municipalities and the establishment of a "shot gun" quarantine at irregular intervals through the small municipalities and countryside.

The late Doctor Benjamin Lee, the first Secretary of the old State Board of Health, a most estimable and scholarly gentleman, did splendid preliminary work for a period of twenty years, but his Board was so crippled by lack of funds and so circumscribed and limited in its powers that long before he died he had come to look upon this twenty year era as missionary work only. It was during this period that the first sanitary code was approved by the Legislature ten years after the creation of the Board in June, 1895. This first State Act required the reporting of but eleven diseases and yet in the ten years that it was in operation enforcement was made in only a few of the larger cities, the law remaining a dead letter in the smaller municipalities and in the country districts.

The year 1905 is a memorable one in this commonwealth from a public health standpoint, because in this year the most comprehensive public health act that up to that time had been adopted by any State in the Union was enacted into law

largely through the efforts of Dr. Charles B. Penrose. I refer to the act creating the Department of Health and defining its powers and duties. This comprehensive law was accompanied by companion acts, one to preserve the purities of the waters of the State for the protection of the public health, and the other to provide for the immediate registration of births and deaths throughout the commonwealth of Pennsylvania.

The act creating the Department of Health is typical of modern legislation and centralized the power in the hands of the Commissioner, making provision, however, for an Advisory Board consisting of five physicians and a Civil Engineer upon whom the Commissioner may call for purposes of consultation and for the adoption of rules and regulations. The act creating the Department of Health was also accompanied by an appropriation bill giving sufficient funds for enforcing these public health reforms and for placing public health matters on a high plane throughout the State.

The act providing for the prevention of the pollution of public waters delegates all authority for protecting streams to the Governor, the Attorney-General and the Commissioner of Health.

The act creating the Bureau of Vital Statistics made provision for the first time for establishing a system of registration such as had been urged by medical societies of the Commonwealth and by the American Medical Association for many years—in fact this law as adopted is verbatim as approved by the Pennsylvania State Medical Societies and the American Medical Association.

Additional duties were placed upon the Commissioner by making him ex-officio member of the Quarantine Board of the Port of Philadelphia, a member of the Water Supply Commission and a member of the Council for the registration of physicians and dentists. The law gives a broad general grant of authority to the Commissioner "to determine the most practical means for the suppression and prevention of disease."

The various laws under which the Department has been organized are so broad and liberal that the Commissioner was not hindered in determining what assistants were needed to carry out the work imposed upon him, and gave him full appointive power enabling him to purchase all supplies and materials needed for work; giving him and his agents permis-

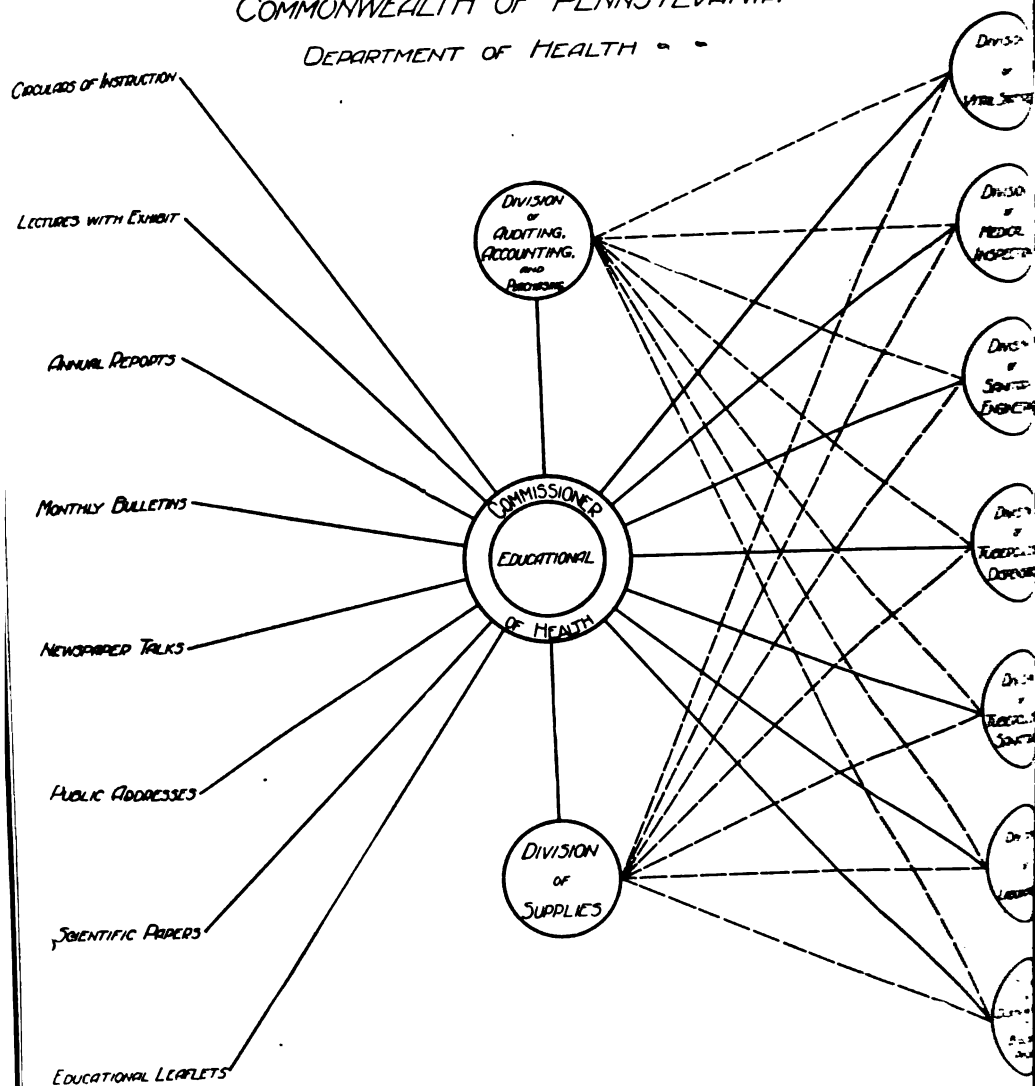
sion to enter premises without let or hindrance for the purpose of examining and surveying grounds, schools, buildings and any premises suspected of containing nuisances or determining questions affecting the security of life and health; authority to abate nuisances and enforce quarantine regulations; to supervise registration of births, marriages, deaths, to require the attendance of witnesses, issue warrants, etc., and provided that the violation of the Department's orders constituted a misdemeanor.

Prior legislation had provided for the organization of local Boards of Health in cities, boroughs and townships. A few of the larger municipalities were doing effective work when the Department was organized; the smaller boroughs were doing nothing except when smallpox occurred, when irrational spasmodic activity was noted for a time only to die out with the end of the epidemic. All the vast rural districts and mountainous sections were without health supervision of any sort, and prior to 1905 human beings were born, lived long lives and died with less likelihood of official record of their existence being made than was the case with high bred cattle, horses or dogs, unless they chanced to be born in two or three of the more important cities.

Municipalities and private estates were permitted to discharge their sewage into the streams of the Commonwealth without hindrance.

The present plan of organization then has been worked under the powers already referred to and with the authority conferred upon the Commissioner by the three acts mentioned. The first work of the Commissioner of Health very naturally was to plan a Bureau of Vital Statistics; and almost simultaneously a Division of Medical Inspection was organized and these were closely followed by the organization of the Division of Sanitary Engineering and the Division of Laboratories; a little later other divisions were organized, notably one for the Distribution of Biological Products and still later the Tuberculosis Division for the operation of Tuberculosis Dispensaries and Sanatoria, and as the organization grew, two additional divisions were organized—one for Auditing, Accounting and Purchasing and one for the Distribution of Supplies.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF HEALTH



SCHEME OF ORGANIZATION

The little diagram herewith presented will enable you to easily follow the discussion and give you a comprehensive idea as to how these various divisions are operated directly under the supervision of the Commissioner and how all information obtained by these various divisions in their field work that is of value in an educational way is constantly given to the public. You will note that each of these divisions derives its power and authority from the central executive head and reports directly to that head; that the Division of Accounting and Purchasing and the Division of Supplies do their various duties under the supervision of the executive head and do their particular line of work for each sub-division of the Department; and that in the office of the Commissioner all the vast amount of material reaching him through field reports is reflected back to the public as indicated in the diagram.

VITAL STATISTICS.

The Bureau of Vital Statistics has a registrar in charge, a working office staff and a registrar with a deputy in each city, borough and large centre of population throughout the Commonwealth. These local registrars receive all birth and death certificates in their respective communities and transmit them to the registrar of the department; they issue all burial permits previous to interment, and such compensation as is allowed for their work is received from the treasurers of the various counties. All of the important statistical work of the Department is done in this Bureau of Vital Statistics. It may be of some interest to you to know that since the organization of the Department in 1905 up to the end of the year 1913 that a total of 1,558,315 birth certificates have been received in the central bureau, have been permanently bound and filed away in fire proof vaults; that 914,655 death certificates, 489,560 marriage certificates, 62,805 certificates of still births are similarly filed and recorded ready for family reference and for legal use; that in addition to these various certificates, nearly a million reports of various communicable diseases have been similarly received. All these reports have been classified, tabulated and published from year to year so that students of health and disease may at any time have access to them for purposes of study and so that health authorities may use them as a trial balance sheet for the purpose of proving all public health

results. This Bureau receives its reports from 1179 local registrars, from nearly 1,000 boards of health and from the Department's local Health Officers in rural districts, nearly 700 in number.

MEDICAL INSPECTION.

The Division of Medical Inspection was organized for the purpose of supervising the details of quarantine in rural districts of the Commonwealth and handling of problems in preventive medicine more or less of a medical character. The Department is represented in each county by a medical officer known as the County Medical Inspector. The rural districts, *i. e.*, townships of the second class, are arranged in sanitary districts with a health officer, usually a layman, in charge and it is to this officer that morbidity reports are forwarded. Under the supervision of the County Medical Inspector this Health Officer establishes quarantine, notifies school authorities concerning the existence of diseases requiring exclusion, and disinfects premises and certifies to disinfection at the conclusion of quarantine. The County Medical Inspector becomes the Department's consultant in public health matters in his district and in a general way keeps in touch with all public health work in the municipalities in his county. This officer determines the diagnosis in many cases of communicable disease where the diagnosis is a question of doubt; he establishes safe regulations for the sale of milk on dairy farms where diphtheria, scarlet fever, meningitis or smallpox develop and assists local communities when epidemics develop.

The details of medical inspection of schools in the fourth class districts is supervised by this Division, nearly one thousand physicians performing the work. Sanitary inspection of schools is supervised by this division, the Health Officer doing the work in all districts electing to have no medical inspection; and for a period of years sanitary inspection of dairies was done, *i. e.*, prior to 1911, when this work was taken over by the Livestock and Sanitary Board. At the present time the entire force of physicians in the Medical Division of the Department's work is about 1,000 and the total number of officers reach about 1800.

SANITARY ENGINEERING.

The Division of Sanitary Engineering is one of very great

importance in all comprehensive plans for State health work. The Division organized with a Chief Engineer in charge and has seven sub-Divisions. The details of every sewerage system about to be built, the full plans of all public water works systems, filtration plants, sewage disposal works are investigated by this Division preliminary to approval of plans by the Commissioner of Health. Decrees are issued by the Commissioner, with the approval of the Governor and the Attorney-General, requiring the installation of sewage disposal works in municipalities, after the adoption of comprehensive sewerage systems. Even the plans for the extension of water and sewerage systems already existing must be investigated and approved before such extensions can be built. The supervision of the operation of these water plants and sewage plants and important work in water born epidemics comes within the province of Sanitary Engineering. Some idea of the amount of work coming before the Commissioner through the Division of Engineering may be obtained by referring briefly to figures. Up to the end of December 1913 some 52,652 separate stream pollutions have been permanently abated; 184 comprehensive systems have been built or are in course of construction, 85 sewage treatment plants have been built and 6 were in course of construction, 14 of them being for large municipalities; 100 water purification plants have been built, 25 of them by municipalities, 72 by water companies and 3 institution plants.

BIOLOGICAL PRODUCTS.

During the first year of the Department's organization it was determined by the Attorney-General that the appropriation bills were comprehensive enough to permit the distribution of diphtheria antitoxin so that physicians might get for their patients unable to purchase it the specific antidote to this deadly disease. 671 distribution stations have been organized, nearly all of them in drug stores or at convenient points where distribution is made easy, and 68 of these stations distribute tetanus antitoxin. It will be of a great deal of interest to your Society to know that from the time of the organization of this Division in the latter part of 1905 to the end of 1913, nearly 46,000 persons have been immunized against diphtheria and about 57,000 persons have been treated; that more than 150,000 packages of diphtheria antitoxin and about 800 packages of

tetanus antitoxin have been distributed free of cost to Pennsylvania citizens, and this outside of the cities of Philadelphia and Pittsburgh, where municipalities manufacture and dispense antitoxin.

Vaccine virus is distributed through this Division to the Department's officers for use in vaccinating the poor and those exposed to infection where outbreaks of smallpox develop, and with the development of the active campaign for the prevention and cure of tuberculosis, the Biological Division supervised the distribution of various tubercle bacilli products, approximately 50,000 doses of the various products having been distributed to the end of 1913.

LABORATORIES.

Early in the history of the Department's organization the Commissioner of Health was able to announce to the physicians of the Commonwealth that Laboratory facilities had been provided for the diagnosis of certain morbid conditions and for the detection of obscure sources of disease. Many lines of work have been undertaken for the profession, work often that the busy practitioner had not been especially trained to do. You will be interested to know that during the interval between the organization of this Laboratory work and the end of 1913 the physicians have forwarded for analysis 342 blood specimens to be studied for malarial parasites; that 4585 specimens were submitted for Widal's test; that 40,311 sputum analyses were made; that extended urine analyses were made in 1252 cases; I may say incidentally that urine analysis is only undertaken when some study is required that the general practitioner is not equipped to take up; that 734 pathological fluids were studied; that 1419 morbid growths were analyzed; that careful bacteriological analyses were made of 40,822 samples of water and 368 samples of milk; that 479 specimens of feces were submitted for extended study and that 3788 miscellaneous specimens were submitted and studied; a total of more than 94,000 Laboratory studies being made; that in addition to this Laboratory work done for the medical profession a great deal of research work has been undertaken and published from time to time. Beginning in the middle of 1912 the Laboratory took over the manufacture of tubercle bacilli products for use in Dispensaries and Sanatoria, a

total of 29,546 doses of these products having been made up to the end of the year.

No one knows better than a medical man the value of scientific study in helping to determine the cause of obscure diseases and perhaps no part of the work has brought more appreciation from physicians than has this phase of the Department's activities.

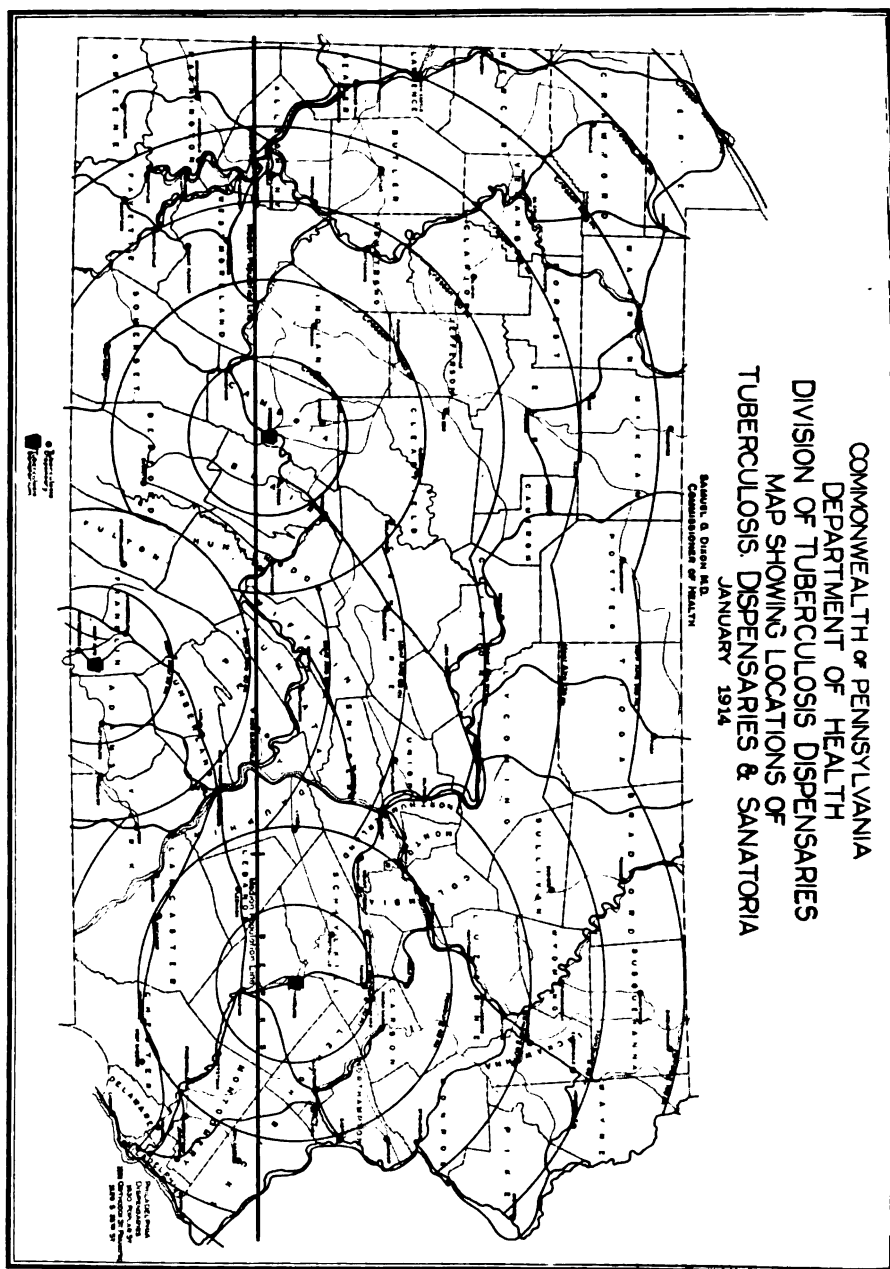
AUXILIARY DIVISIONS.

As already pointed out the Purchasing, Accounting and Auditing Division, and the Division of Supplies relieve the various executive Divisions of much office detail and assume a large proportion of the responsibilities for each of these lines of endeavor and each of these Divisions so dovetails into the other working Divisions that the whole staff merges into one great machine all operating under the one central executive head.

TUBERCULOSIS.

DISPENSARIES.

In 1907 a further advanced step was taken by the liberality of the Legislature in providing a million dollars to organize a campaign against tuberculosis. In order to effectively organize this campaign two important sub-Divisions were organized: One for the supervision of free Dispensaries throughout the Commonwealth and one for the operation of Sanatoria. At first Dispensaries were organized in each county seat under the supervision of the County Medical Inspector. This work grew rapidly so that in a short time nurses were added to the various Dispensary staffs and additional physicians were appointed; later Dispensaries were organized in all of the larger centres of population so that today 114 Dispensaries are in active operation with a staff of more than 200 physicians in charge assisted by 119 sociological nurses, thus bringing expert medical supervision and the aid of carefully trained nurses within the reach of practically all of Pennsylvania's tuberculous sick not able to secure the services of family physicians. The Dispensary Division has done an enormous amount of work since its organization in 1907 and their figures show that up to the end of 1913, 64,519 persons were examined and found to have tuberculosis; and some



16,989 were examined, many of them other members of the household, others, persons in ill health from various causes, that were not found to have tuberculosis; and during this time the nurses paid 660,286 visits to the homes of the poor.

The Department's tuberculosis appropriations have been liberal enough to permit the distribution of milk and eggs to the poor, nearly seven million quarts of milk being distributed free of cost to those not able to purchase a suitable supply for feeding the sick. It is almost impossible to estimate the great value of the nurses' work in all of these homes or to estimate the amount of sanitary reform accomplished by them in management of household details, and, if it were possible to stop for a moment, I should like to have elaborated upon the amount of good cheer brought into many humble homes by visits of the sociological nurses around Christmas time or when patients are about to go to Sanatoria. It is at such time that they secure the most active co-operation and assistance of the various philanthropic and charitable agencies. Hundreds and hundreds of patients have been completely equipped for their trip to the Sanatoria; thousands of patients have been given pleasant Christmas remembrances; vast numbers have been given the paraphernalia for sleeping with wide open windows at home.

SANATORIA.

With the increasing appropriations for tuberculosis Sanatoria were organized and at the present time Pennsylvania boasts of having the largest sanatorium in the world, an institution with 1058 beds (increased recently through erecting tents to 1122) at Mt. Alto; a second Sanatorium at Cresson with a total of 344 beds and a third Sanatorium will soon be opened at Hamburg with a total of 480 beds. As physicians you will be interested to know that from the time the little mountain camp organized in the State Forest Reservation at Mount Alto was taken over in 1907 up to the end of 1913, that 10,862 patients were treated and remained on an average for a period of four months, and that of that number about one-half were far advanced cases of tuberculosis, about 38 per cent. were cases at a moderately advanced stage of this disease, and that about 14 per cent. were incipient. You will be interested to know that in the first year of Cresson operation, that is up to the end of 1913, 942 patients were treated and

the same relative proportion of advanced and incipient cases were admitted. You will be interested to know that with the completion of Hamburg Sanatorium, Pennsylvania will have a total of considerably more than 1800 beds and that with the proposed addition about to be built at Cresson the total free bed capacity operated by the State Department of Health will reach 2,000. This work is of untold value from a public health standpoint.

EDUCATION.

The educational phase of the work naturally is carried on in many ways, but the bulk of it is directly under the eye of the Commissioner himself. During the time Doctor Dixon has presided over the Department's activities up to the end of 1913, he has given out for publication more than 650 articles of an educational value. In addition to these weekly talks an edition of 10,000 Bulletins has been published each month for the last four years. Several million copies of the various educational leaflets and quarantine circulars have been edited and distributed and large numbers of scientific papers and public addresses have been contributed by the Commissioner and his various assistants.

Annual Reports have been edited giving much of the detail of the Department's work, a traveling Tuberculosis and Sanitary Exhibit has been shown in every large centre of population in the Commonwealth, and for several years an Infant Welfare and lately a School Hygiene Exhibit has been sent to communities conducting an active campaign along these lines.

You will gather from this discussion of the Department's activities that a vast staff is required, a total of nearly 4,000 persons contributing part time or full time to do the real work of the Department.

In conclusion let me briefly summarize some of the results that have been accomplished.

In 1906 a complete set of figures for births and deaths were collected for the first time in this Commonwealth. In that year 114,435 persons died from all causes and the death rate as corrected by the latest estimates from the central statistics office was 16 per thousand. The general death rate has steadily declined, the rate being 15.9 in 1907; 15.6 in 1910; 14.5 in 1913. This saving of a few points per thousand means much when translated into actual saving of life. Had

the death rate for 1906 been maintained up to the end of 1913 more than 60,000 would have died that are presumably alive and well. In other words the public health activities in the Commonwealth of Pennsylvania from 1905 to the end of 1913, may, with perfect fairness, be said to be responsible for the saving of more than 60,000 lives.

TABLE.

DEATHS IN PENNSYLVANIA—1906 TO 1913 INCLUSIVE.

Year	Population	Deaths from all causes	Rate per thousand	Saving as compared with 1906
1906	7,141,766	114,435	16	
1907	7,279,972	115,969	15.9	510
1908	7,417,816	112,246	15.1	6439
1909	7,555,841	111,062	14.7	9829
1910	7,693,866	119,815	15.6	4296
1911	7,831,904	112,292	14.2	13018
1912	7,969,904	111,842	14.0	15976
1913	8,107,980	117,995	14.5	11732
Total Saved—				61690

Those who are statistically inclined frequently attempt to show results in dollars and cents. Political economists nowadays rate the average human life, deaths at all ages being taken into consideration, at from \$1700. upward, Courts placing the valuation as high on the average as \$5,000., but for the sake of our discussion let us put the rate at the minimum of \$1700., calculating the saving in dollars and cents with the even number of 60,000 lives and you will readily see a saving amounting to \$102,000,000. The appropriations to the Department of Health ran a little more than 13½ million dollars during this time, let us say, an even 14 million for convenient calculation, and let us estimate than an equal amount of 14 million was appropriated to Health Departments in various municipalities and to other agencies doing work closely allied to public health work; we are perhaps considerably too high, but let us grant fourteen million dollars for this sort of thing and add an additional six million dollars as that contributed by the philanthropic and charitable agencies contributing largely in the educational campaign, making a total of 34 million of dollars. Counting this as an investment, with a saving of

102 million dollars, you will find your investment has increased a full 300 per cent.; certainly an investment that would satisfy any capitalist in the world.

I would not have you believe that all of this saving of life has been due to the State Department's activities, because many Boards of Health in urban communities have been doing splendid work during all of this time and many philanthropic and charitable and professional organizations have contributed powerfully to the campaign. The State Department, however, has been directly and solely in charge of public health work in rural districts with a total population of more than two and one-half million and direct executive supervision of a much larger population than that of any other single agency; and through tuberculosis and sanitary engineering activities and distribution of diphtheria antitoxin has done effective work in every municipality in the Commonwealth and has stimulated many communities into doing effective Public Health work.

There is enough glory for all and certainly each person contributing in any way toward this great educational campaign has reason to be proud of what has been accomplished. Before closing, let us discuss for a few minutes the diseases where this active campaign has been most effective. In 1906, the death rate from typhoid fever was 54.8 per hundred thousand. By the end of 1912 it had dropped to 18.1 per hundred thousand, a decline of 66 2-3 per cent. It is fair to claim that this decline is largely due to installation of better water works, to the installation of sewerage works, to the abatement of nuisances that are a menace to health and likely to pollute water supplies, and to the establishment of proper restrictions and safe regulations on premises from which milk and milk products are sold.

The death rate from diphtheria in 1906 was 34.1 per hundred thousand. By the end of 1912 it dropped to 25.9. Here I am sure you will all agree that the distribution of diphtheria antitoxin for curative and immunizing purposes and the proper administration of quarantine and establishment of safe regulations for the sale of food products has been responsible for much of the decrease.

The death rate from all forms of tuberculosis in 1906 was 150.9 per hundred thousand. By the end of 1913 it had dropped to 120.9 per hundred thousand. Medical men will concede that the tuberculosis campaign has contributed in a telling way

the activity of the Department's Dispensaries, the lessons impressed by our sociological nurses, the influence of the various Sanatoria, whether governmental, endowed or private, all have been contributing factors.

Even in some of the communicable diseases where physicians are skeptical as to the result of quarantine, figures seem to show practical results. In whooping cough the death rate in 1906 was 21.7. In 1913, 10.9. The rate was cut almost in half. From 1550 cases in 1906 the disease dropped to 898; notwithstanding the increase in the total population. You will all agree that prior to 1905 practically no control of whooping cough was undertaken, and yet this disease dropped steadily year by year with better supervision until today the death rate itself is enough to justify the precautions that were taken.

With measles and various other contagious diseases similar declines in death rates can be shown, although not so graphically. With one disease I regret to tell you no results have been shown. Cancer in 1906 was responsible for the death of 4208 persons and in 1913, 5854 deaths are attributed to this disease. The death rate has increased from 58.9 to 72.2 per hundred thousand.

The profession is already awakened to the ravages of this disease and are ready to take drastic steps as soon as research work shows what had better be done.

So much then for the Department's activities and so much for results. No one is directly responsible for these results. The medical profession, however, have given unstintingly of their time and have everywhere supported the State Department of Health and local Departments of Health and certainly deserve a very large measure of credit for what has been accomplished.

THE RELATION OF INSECTS AND VERMIN TO DISEASE.

BY

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NEVER before in the history of the world has there been so keen an interest in the health and well-being of the individual as has been shown during the decade just passed.

Investigation into the relation of insects and vermin to disease, and the application of the knowledge gained have demonstrated that the mortal epidemics of past ages are no longer to be feared.

We are pleased to consider this the age of scientific discoveries; yet we must acknowledge that the alert mind has been peculiar to no age,—and the ancients themselves appreciated the fundamental facts in all science. “Thou shalt not be afraid of the pestilence that walketh in darkness” sang David, scholar as well as warrior. Wandering over the hills of Palestine he had marked the relation between darkness and disease, between the insects that pervade the night and the plagues that decimated his ranks.

The Egyptians venerated the cat. They observed that where these animals were numerous, plague was less frequent; and while they did not understand clearly the reason, they were close to the truth. Their powers of observation were more acute than their scientific knowledge.

According to Sir Henry Blake there is extant in Ceylon a writing 1400 years old in which the mosquito is stated to be the carrier of malaria fever. We know that Dr. Knott of Mobile, Alabama, in 1848, declared that yellow fever was conveyed by the mosquito. About the same time a Venezuelan observer arrived at the same conclusion. Twenty years ago it was noted that if a yellow fever infected vessel was promptly subjected to a thorough sulphur fumigation, the danger from the spread of the disease was in very many instances entirely removed. Surgeon Henry R. Carter of the Public Health Service observed the extrinsic period of incubation of yellow fever; or in other words that the secondary cases did not appear until about two week after the primary case. From 12 to 14 days must elapse following the ingestion of the yellow fever organism before the mosquito can successfully inoculate his victim. Following these suggestions Reed and Carroll made plain the reasons for the statements of early observers.

Among insects capable of spreading disease, the fly, from its omnipresence is the one that comes most prominently to mind. The name “typhoid” fly has been given to this insect, but this is a mis-nomer. There are so many crimes to which the fly may be accessory that there is no reason for the limitation of its name. While we know that it is capable of conveying typhoid fever under favorable conditions, it is equally

capable of infecting food and drink with cholera, dysentery, diarrhoea in infants, anthrax, yaws, erysipelas, ophthalmia, diphtheria, small pox, plague and tropical sore. These diseases are transferred mechanically, and it is thus that the common house fly, "*Musca domestica*" must act always. The average number of bacteria on the surface of a fly has been placed at 1,250,000, and those in the intestinal tract are six or eight times that number. The fly is a mechanical conveyer, depositing the germs on the body of the victim, or more frequently on food or in drink from its external surface or by the deposition of its dejecta.

In its life as a scavenger, the fly naturally finds the material from which to acquire the bacillus typhosus both externally and internally. In a well sewered town this danger is limited, but in the country and in camps with their open unsanitary privies, the conditions are much more favorable for the fly's vicious work.

Dr. M. J. Rosenau, Professor of Preventive Medicine, Harvard College, and formerly Director of the Hygienic Laboratory, has found that the stomoxys calcitrans or stable fly is capable of conveying by its bite acute poliomyelitis or infantile paralysis. These findings were later confirmed by Anderson and Goldberger. While this insect may not be the sole conveyor of the infection it certainly explains its formerly inexplicable appearance in certain localities. The first case that came under the writer's observation was a child in a country neighborhood where this disease had never before been known. It was in the berry season and it is supposed that the child must have contracted the infection in the pastures. This we know now was, in all probability actually the case.

The tse-tse fly or *glossina palpalis* is responsible for the spread of sleeping sickness, a disease fortunately at the present time confined to a more or less limited area in Central Africa. It has no special interest for us beyond certain general conditions which will be noted later. Possibly some of the negroes formerly brought to this country, and said to have died of homesickness, may have been suffering from this disease. In the absence of proper means for conveyance the infection ended with their death.

The flea, is more closely associated with the spread of bubonic plague than that of any other disease. Early in this century plague gained entrance to our shores at the Port of

San Francisco. This disease is peculiar to rats and other rodents. In 1908, McCoy demonstrated natural plague in ground squirrels. Previously there had been indications that it existed and was carried to some extent in these animals.

In the conveyance of plague the flea acts as transfer agent, *i. e.*, he bites the infected rodent and in some manner conveys the germ to his human victim. Two methods of conveyance have been demonstrated. Bucot and Martin working in the Lister Institute have recently shown, first: That intestinal dejecta may be deposited by the flea at the time he is biting and the germ later gains entrance through the abrasion in the skin; second, that from the stomach of the infected flea the bacillus pestis develops upward into the œsophagus and in some instances the glutinous masses prevent the entrance of food into the stomach. Hunger renders the flea voracious and correspondingly dangerous. The œsophagus becomes distended with blood and on cessation of the pumping act, some of the blood mixed with the germs is forced back into the wound.

One very competent observer of wide experience with the disease, claims that a daily bath is one of the most efficient means of obviating the danger from plague infection. Certain is it that people of cleanly habits rarely contract the disease though living in infected localities. In Calcutta, a city in which the disease has existed for twenty years, there has never been a case among any of the residents of the European quarter. Here there are about 60,000 Europeans surrounded by nearly 1,000,000 natives.

During my sojourn in India, the daughter of our Consul at Bombay was one day playing with her dog in the compound and both were greatly amused at the time by chancing upon a rat in a dull lethargic state. Later the girl and her mother were stricken with plague. The child died and then it was evident that the rat had been infected and its fleas had gained access to mother and child.

In 1908 under the direction of Surgeon General U. S. Public Health Service, Dr. Rupert Blue, an intelligent fight was begun against the spread of bubonic plague in San Francisco, and for the first time in the history of medicine we saw a scientific method of handling this disease in successful operation. About this time it was discovered that the ground squirrel and other species of rodent harbored the disease in the same manner as the common rat, and work was undertaken

to make a squirrel free zone around the city of San Francisco. This work has been crowned with success; the indications are that San Francisco and its vicinity are free from infected rodents and the disease is apparently eradicated.*

It may be well for us to note for a moment just what it means to the people at large that the knowledge of how to overcome bubonic plague has become available for our protection. In the city of Naples, Italy, some three hundred years ago, there perished 380,000 souls in six months of plague. In Constantinople in 1812 there were 144,000 deaths from the same cause. In China during the reign of the so-called black death which prevailed in the 14th Century, there was a mortality of almost 13,000,000. The disease spread rapidly to the westward and somewhat later about 25,000,000 people died in Europe from the same cause. Today with the knowledge which we possess of this scourge we know that it can be absolutely controlled.

The mosquito family is legion, and its connection with certain disease has been thoroughly worked out. We know positively that the *stegomyia calopus* is the conveyor of yellow fever. Various species of the genus *anopheles* are the intermediary hosts of malaria and chagras fever. Dengue and filariasis are also credited to the *culex*.

A few years ago the mere mention of the construction of the Panama Canal caused a chill of apprehension when we considered the horrible possibility, nay probability, of the introduction of yellow fever among the non-immune millions of the orient. This fear was then well founded, but through the efforts of Reed, Carrol and Lazear the intimate connection of the disease with the mosquito was learned, and the subject of yellow fever infection can now be regarded calmly and without fear. We know that cases have been carried to Honolulu, but their discovery at quarantine and the fumigation of the ship made it possible for the vessel to be docked without the slightest fear of further spread of the disease. It may not be amiss to call to your attention some of the past horrors of this scourge. Prior to 1898 the death from yellow fever in the city of Havana for more than 50 years averaged 2 per day. From time to time yellow fever gained access to our shores through the various ports, causing, as in 1878, the deaths of 1400 people in the Mississippi Valley, and paralyzing com-

*J. D. Long: Public Health Report, Nov. 20, 1914, p. 3103-3107.

merce to the extent of millions of dollars. In the year following the discovery of the means of the prevention of this disease, nearly 35,000 people met their death in Brazil. Today, Santos, Rio, and other Brazilian cities have come to be considered as health resorts as compared with their previous record. The entire island of Cuba is now practically free from yellow fever. In 1905 a little excitement was awakened by the appearance of yellow fever at the port of New Orleans. Under the efficient management of Surgeon J. H. White of the U. S. Public Health Service, and his capable corps of medical officers, two of whom contracted the disease in the course of their work, we for the first time in our history find that the spread of yellow fever was stopped before the appearance of frost. This was accomplished by the destruction of mosquitoes and the screening of the sick. The patients were treated in a general ward without the slightest danger of infection to their companions, the only precaution being to cover them with a mosquito netting or screen.

We regard malaria with more or less indifference but when we learn that the annual cost of this disease to the country is about \$100,000,000, its seriousness in a measure is brought home to us. Col. Goethals has made the statement that there was not wealth enough in the United States to have constructed the canal at sea-level across the isthmus. He might with equal truth have declared that there was not laboring force enough in the United States combined with all the forces of the foreign countries furnishing help to have constructed a canal at its present level had it not been for the intelligent efforts that were put forth for the prevention of malaria and yellow fever, by the destruction of the mosquito. Only a few years ago ships were allowed to rot in the harbor of Panama because the crews had died and sailors could not be secured for handling of the vessels. Since the destruction of the mosquito in the canal zone the mortality there has been lower per thousand than in the city of New York.

Attempts for the intelligent control and reduction of malarial fever are yet comparatively rare, but what has been accomplished at Ismalia on the Suez Canal illustrates what may be successfully done in improving the health of a community. In 1900 there were 2284 cases of malaria in this little town. During that year under the direction of Sir Roland Ross work was undertaken for the destruction of the anopheles mosquito,

with result that during the following year the number of cases was reduced to 1990. There was a progressive decrease until 1905 when there were only 37 cases, and since that time the only cases in the city have been imported; the malaria bearing mosquito has been practically exterminated.

Col. Leonard Rogers of the Indian Medical Service, with whom I was associated in Calcutta, has recently done some work of the highest order in connection with Kala Azar that rather fatal and very wide spread disease of the orient, which thus far is unknown on this continent. He states that the *cimex lectularius* in all probability acts as the carrier for this disease.

Considerable interest has recently been awakened in this country in regard to ticks. It is now known that the *dermacentor venustus* is the carrier of rocky mountain fever. Two years ago Past Assistant Surgeon McClintic of the U. S. Public Health Service was engaged in the study of this disease, and unfortunately sacrificed his life in the search; his was the only fatality for the year. This disease was apparently not unknown to the ancients for it is interesting to note that Chinese records more than 1000 years old contain accounts of "tsutsugamishi" disease in which the tick is said to be the conveyer of the infection and recent researches have proven this to be the truth.

Typhus fever is another insect borne disease. Last Spring seventeen cases came to the Port of New York. The centre of infection was situated about the seat of the Bulgarian war; most of the victims of the disease were from countries in that region. It is now known that the *pediculus vestimenti*, a parasitic animal not commonly found in good and cleanly society, acts as the typhus fever carrier.

The hookworm claims its victims among the inhabitants of a belt of about 66 degrees in width around the earth; the zone of the disease extends north as far as the 36th parallel of latitude and south to about the 30th parallel. In the production of inefficiency and general worthlessness the hookworm is of greater gravity than malaria. Our attention was turned to this disease in 1897 when a large percentage of the workers in the St. Gothard tunnel were infected. The polluted soil of tunnel was impregnated with the eggs and larvæ of the hookworm. Its first manifestation is the so-called ground itch characterized by a small sore appearing upon the feet or legs and

caused by the presence of the *anchylostoma duodenale* in Europe, and the *necator americanus* in this country. Through the abrasion made in the skin the insects gain access to the lymphatic system and finally find their way to the duodenum. Here they fasten or hook themselves to the intestinal wall and acting as blood suckers and generators of toxins, their presence gives rise to a profound anemia. The eggs and larvæ of this parasite escape with the intestinal dejecta. Individuals working in infected soil thus contract the disease. Some years ago an observant planter in one of the West Indies discovered that those of his laborers who covered their feet with a coating of tar were more efficient workers than those who did not take this precaution. Consequently he ordered all of his men to plunge their feet into a tarry mixture with the result that he had the most capable force to be found on the island. We now know that a few doses of thymol and protection to the lower extremities from soil infection confers complete immunity from the disease.

In Porto Rico this scourge has been most efficiently controlled, and the economic gain consequent thereto has been beyond estimate. An able bodied coffee picker can gather 500 to 600 measures daily; a laborer infected with hookworm disease can gather only 100 to 250 measures; the disease reduces the efficiency of the victim about two-thirds, and this is a safe estimate. When the work of control was first undertaken in Porto Rico, in 1904, the death rate was almost as high as that of Panama, but to-day the mortality rate is less than that of the Canal Zone.

We hear much of the high cost of living and the majority of us are forced to give the subject very careful attention. Probably if the question is ever to be settled satisfactorily it will be through the intelligent handling of insects and vermin with a view to their destruction. There are millions upon millions of acres of the most fertile soil under the sun waiting for the hands of the tiller, and these may be cultivated so soon as the soil is freed from disease breeding insects. We can hardly estimate the economic gain, and the amount of produce that in a few years could be raised upon these uncultivated acres of the tropics which to-day can hardly be approached without danger to life. It is only a question of time when these areas, once freed from insects and vermin, will be made to yield for us the products of which we are now in such dire need.

Scientists are now agreed on the following proposition: "No mosquitoes, no malaria or yellow fever. No fleas, no bubonic plague. No lice, no typhus. No tse-tse fly, no sleeping sickness. No ticks, no spotted fever." The disease breeding insect is no respecter of persons, he bites the rich and the poor alike: and wherever filth is, whether on the human body or in the human habitation, there illness will abound.

BUREAU OF OPHTHALMOLOGY, OTOTOLOGY AND LARYNGOLOGY

TUMORS OF THE HARD PALATE.

BY

GEORGE JAMES ALEXANDER.

(Read before the State Homœopathic Medical Society at Wernersville Pa.,
September 25, 1914.)

DURING the process of selecting a subject for a paper to be read before this society, it occurred to the writer, to speak of tumors of the hard palate, for the purpose of reporting a case of Adeno-carcinoma in this region, which has come under his care.

Tumors of the hard and soft palate are only moderately prevalent; and with a few exceptions, which will be specially dealt with later, both are heir to practically the same kinds and groups, together or singly, as the list which is to follow will show.

In reviewing the list which was compiled from the literature at my disposal, in a research for cases reported, the writer does not claim absolute accuracy, because this work for the most part, was done by French, German, and in a few instances, Italian authors. The latter, I was obliged to pass over almost entirely: there being also several instances of French writers that had to be overlooked, because of my inability to make an accurate translation. Following is the list:

1. Tumors of the hard palate, Sixteen.
2. Tumors of the soft palate, Fourteen.

3. Tumors diagnosis and location not mentioned, Four.
4. Tumors diagnosed, but location not stated were:
 - Teratoma.
 - Adenoma.
 - Sarcoma.
 - Epithelioma (two cases).
5. Tumors of the soft palate, diagnosed:

Epithelioma,	Three.
Teratoma,	Two.
Lipoma,	Two.
Adinoma,	One.
Papilloma,	One.
Fibro-carcinoma,	One.
Endothelioma,	One.
Enchondroma,	One.
Angioma,	One.
6. Tumors of the hard palate, diagnosed:

Epithelioma,	One.
Teratoma,	Two.
Mixed Tumor,	One.
Adenoma,	One.
Papilloma,	One.
Fibrous-polyp,	One.
Fibro-adenoma,	One.
Fibroma,	One.
Sarcoma,	One.
Melano-sarcoma,	One.
Odontoma,	One.
Osteatoma,	One.
Dentigerous Cyst,	One.

The above list of the series, shows that in a number of instances, the same kind of tumor, may, and does involve the hard or soft palate individually, while in others, both are involved at the same time, by the same tumor; this is particularly true of epithelioma and sarcoma, for in most instances, where both portions of the palate are involved simultaneously, one of these two types of tumor is present, their frequency being in the order mentioned; and it does seem, that of all the tumors of the palate, epithelioma is the most common; of those affecting either the hard or soft palate separately, and with corresponding frequency, Teratoma, (dermoid cyst) Adenoma and Papilloma, along with a number of mixed tumors, are the most prominent.

With this resume of the character or kind of tumors, and the frequency with which they involve the hard and soft palate, separately and in conjunction, we now come to those which comprise the subject of this paper, namely, "*Tumors of the Hard Palate*"; with the report of a case of "*Adenocarcinoma*" in this region.

Patient, Mrs. E. T., Age 33 years, consulted the writer in

June, 1914, in reference to a growth in the roof of her mouth, situated at the junction of the alveolar process with the hard palate, and over the posterior palatine foramen; the growth had a broad base, was round and sharply outlined, the size of a half walnut, and presented a more or less lobular appearance, which was more distinctly elicited by palpation; fluctuation was also indistinctly obtained by this procedure; crepitus was not present; the surface was perfectly smooth, and the color, the same as that of the other tissue covering the hard palate.

At the age of twenty years a similar growth began to develop at the same spot; which in a period of one year attained a size about two-thirds that of the present growth, and was removed at that time, with complete healing in seven or eight days; pain, fever and inability to swallow, followed the operation. Four years later a tumor again began to grow, and in two years, according to the patient's statement, attained its present size, which would speak at least for a very slow growth during the latter three years of its life. The only symptom resulting from the tumor, was embarrassment caused by interference with her speech; no sign of a scar from the previous operation was present, or at least could not be seen.

On the 14th of July, one month after first seeing her, she came back to have the growth removed.

After first thoroughly anæsthetizing the surrounding tissues by infiltration of four drams of one per cent. solution of Novocain, and waiting ten minutes, I proceeded "painlessly" to remove the growth, by carefully dissecting away the mucous membrane covering the capsule of the tumor, endeavoring to leave the capsule intact; this was done with some difficulty because of the adherence of the mucous membrane to the capsule, then gradually worked my way under the tumor including the periosteum, to which it was intimately attached, having bared the bone (palatine portion of the superior maxillary), the posterior palatine foramen came into view; from the foramen extended a small pedicle or string-like attachment, which diverged, spreading over the surface of the tumor for a short distance: this tissue appeared, and felt like that of nerve, and was no doubt the anterior palatine nerve; which was severed as far up in the foramen as I could reach with a small scalpel; this caused the patient to cringe with pain, which she said extended

to the vertex. The wound was packed with iodoform gauze and eventually allowed to heal by third intention.

Inspection of the mass removed, showed on section, the tissue inside to be white, concentric and rather hard, on being pressed between the fingers there exuded a milky substance from this white tissue, and the thickness of the capsule could be distinctly outlined. The entire mass was sent to the laboratory for microscopic examination and diagnosis.

July 15-14, Day after the operation, the patient was doing nicely, no temperature, pain, or shock, and could swallow and speak without any interference whatever.

July 16-14, Redressed the wound which was clean and dry: the patient flinched when the tissue (nerve) in the foramen was touched with a probe; she had no headache, pain, or symptoms of any kind.

The packing was used in the wound for the purpose of keeping it clean and to have it close by granulation from the bottom upward, or third intention.

The wound was redressed every second day during the first half of the period of healing, and every third day thereafter. Peroxide of hydrogen was used to cleanse the wound and iodoform gauze to stimulate new tissue growth.

On the eighth day after operation the first granulation tissue over the bone surface was present, which, gradually filling up the cavity until Sept. 9-14, a period of seven weeks, when it was entirely filled, the wound closed, and all the surrounding tissues apparently normal. It has been stated that the process of healing required seven weeks, against seven or eight days, the time required for healing after the first operation, which the patient informed me on her last visit, was not done so thoroughly; it having only been "scraped out" as she expressed it; this probably accounts for the absence of a scar, as previously alluded to.

The microscopic findings were the following, the growth was an adenoma in which the interstitial tissue had predominated, but which in turn was being replaced by the formation of many new glands, and the proliferation of epithelial cells into the interstitial tissue, thus giving it a malignant or carcinomatous character.

For this information I am indebted to Doctors St. John, Kolmer and Stevens, all recognized pathologists. Each made a separate examination of the section, compared notes, and

were of one voice as to the diagnosis of Adenocarcinoma resulting from an Adeno-fibroma. This was done because of the rather unusual histological structures presented by the specimen.

It is interesting somewhat beyond the ordinary, that according to the pathologists, this growth started as an adeno-fibroma and during its course developed the present carcinomatous nature.

Now, how did this tumor develop? There must have been first, an adenoma, with its acini lined with columnar epithelium, and its surrounding connective tissue reticulum, the connective tissue stroma or interglandular tissue, may have been hyperplastic, or the bulk of the tumor may have consisted of connective-tissue of fibrous character, in which were imbedded a relatively small number of glandular alveoli, giving it a fibrous character. However, according to Stengel, in all these cases, it is difficult to determine, whether the connective tissue was primary, and the epithelial secondary or the reverse.

The second transformation must have taken place by an active proliferation of the epithelium, which, breaking into the interstitial connective tissue constitutes the carcinoma.

Carcinoma is the most important growth in the mouth, and in nearly all cases, is of the squamous celled or unencapsulated variety.

Hence, those with a distinct capsule, as the one under consideration, are exceedingly rare; though this tumor was a primary one, and malignant, it certainly must have been in a latent state for some time, as the last years of its presence would suggest, or the capsule must have acted as a temporary barrier to its spreading, for there were no enlarged glands in the surrounding region, nor are there any signs of metastasis. Though Dr. Kolmer, thinks its attachment to the nerve was due to infiltration, and that it will recur, the latter is hard to realize from present appearances.

Adenoma and Fibroma will not be considered further, as their character was taken up in combination with that of carcinoma; more than to say, that a pure adenoma is so exceedingly rare, that it can be termed malignant, and while a fibroma is essentially benign, it can only be considered malignant when large enough to kill.

It would not be feasible on this occasion, to go into detail of

all the tumors found in this part of the palate, and particularly those that are also found on the soft palate. Though it might be well to merely mention, that the Teratoma, a congenital cyst, is always found on the median line, its form and contents being familiar to all.

The writer will therefore confine his remarks to three other growths, which, because of their structure and formation, are analogous to the hard portion of the palate; these are Odontoma, Osteatoma and Dermoid Cysts.

Osteatomata, are occasionally encountered on the hard palate; that is, they seem to be there but are really associated with the alveolar process, originating from some malformation, or inflammatory process which is directly traceable to a tooth, or the bone surrounding its roots.

For instance:

(a) Malformation, beginning around the roots of malformed teeth, as in case of accumulation of cement-substance, beginning at the neck of a tooth; termed (dental osteoma).

(b) Empyema or other inflammatory conditions around the teeth, sometimes sets up a hyperostosis, or exostosis.

These growths range from a somewhat diffuse to a sharply outlined form, normally hard and rather irregular of surface, but may be soft if under the influence of a degenerative change, such as myxomatous, etc.

Odontomata, are not common tumors, appear usually in early life, and are composed of tissue resembling normal dentine, and arise as a proliferation of the dental pulp of a tooth during the process of development. It is an epithelial neoplasm, and involves the soft tissues covering the alveolar process on the inner or palatine and the outer surface, with more or less uniformity; this, with the consistency of soft tissue tumors, and the history, form the chief diagnostic points.

Dentigerous Cyst. This condition comes to the rhinologist with more or less regularity, and much could be said about it: for this I refer you to the article written by Dr. G. W. Mackenzie, in the *O. O. and L. Journal*, June, 1912.

Briefly however, there are two forms, congenital and inflammatory. For example:

(a) The *congenital* type, originates from a folding in of the congenital mucous membrane, forming a sack by a constriction at its base; another, or second sack, for the milk tooth

and second tooth is formed; this never becomes filled and grows in all directions.

(b) The Inflammatory form, I am sure is the more common, due to a careous tooth, root abscess covered by a pyogenic membrane, etc.

The condition is seen as a bulging in the roof of the mouth, extending at varying distances, toward the median line of the palate, and at the same time, as a bulging in the canine fossa, or the floor of the nose, or both.

By palpation, egg-shell crepitis can usually be elicited; by aspiration, syrum may be gotten from its cavity; and if it is washed out, the solution comes back the way it enters; but if the cyst communicates with the maxillary sinus, the solution will come through the normal ostium, into the middle meatus of the nose; these, together with the fact that it is lined with stratified epithelium, form some of the means of differentiating it from other similiarly appearing growths in this region.

I hope in this necessarily, abbreviated paper on tumors of the hard palate, I have succeeded in making plain, that it was particularly the presence and differentiation, of the most important Encapsulated and Non-Eroded, sharply outlined tumors, that occur on both, the hard and soft palate, and the few that are peculiar to the hard palate, that I wished to emphasize.

HIGH FREQUENCY CURRENTS IN SOME EYE DISEASES.

BY

WALTER W. SEIBERT, M.D., EASTON, PA.

IN presenting this subject for your consideration, there is no thought of offering you anything particularly new but rather a desire to provoke a discussion of a more or less neglected and—at least in some quarters—discredited method of treatment. We will not touch upon the anatomy, physiology or pathology involved but confine ourselves to the simple report of a few cases and the results attained by the application of the high frequency currents. The construction of the apparatus used and the methods of applying the current will be described. The physiological action of the current and its

possible uses in eye diseases other than those of the reported cases will be touched upon.

Case 1. Mrs. S., aged 70, vision with correction was 20-30 in both eyes, had blepharitis and occasional ulceration of both corneas supposedly due to exposure to heat and products of combustion while working over a gas stove. The condition was of long standing and seemed to be accompanied by very little or no other inflammation of the eyeball. Arcus senilis was well marked and a little haziness of corneas at all times slightly aggravated when corneal ulcers were present. The hyperstatic current was applied at irregular intervals in 1905 and 1906 by means of a vacuum tube, the source of the current being a 12 revolving plate static machine. Marked improvement up to a certain point was at once noticed. The Oudin resonator was then substituted for the hyperstatic apparatus—source of current, the same—and complete recovery resulted with no returns. Under the influence of the current, vision improved, haziness of cornea and discomfort on using the eyes for close work disappeared.

Case 2. Miss C., aged 16, to relieve a chorea wore glasses, but because they annoyed her laid them aside several years ago and then, after a time, developed an asthenopia. Vision 20-50 with each eye. With correction, R.E. $+ 1.50 \text{ } \odot \text{ } + .25 \times 75$ and L.E. $+ 1.25 \text{ } \odot \text{ } + .25 \times 75$ vision in both eyes 20-20. Pupils were thoroughly dilated with atropine and patient kept in dark room with complete cessation of all pain. Prescription was worn and amount of light was gradually increased to a very small extent, as the atropine was gradually decreased and the pain returned. During August and September of 1912 the dim light, atropine and the indicated remedy were continued and no improvement was noted. Then the patient was again refracted and former prescription corroborated. On the 18th of October, the Oudin resonator current was used with a vacuum electrode. After 6 treatments, given semi-weekly, improvement set in. Treatments were then given at longer intervals and complete recovery occurred by the 23d of December after a total of 18 treatments were given. To date there has been no recurrence.

Case 3. Mrs. W., age 53, came to me on October 21, 1910, to be treated with electricity for rheumatism of the back. She was suffering considerable pain in her eyes which were cataractous. To relieve the pain, a vacuum electrode attached to

one end of the d'Arsonval coil was applied to the eyes, the patient being seated on the auto-condensation cushion which was attached to other end of coil. Source of current same as before. The pain in the eyes disappeared promptly and the patient said she imagined she could see better. Previous to this time she had her glasses changed once or twice yearly and then could not use them very long. After she received her first treatment the glasses were not changed until July 1913. The treatments were continued at irregular intervals until June 1911. Nothing more was heard of the patient until April 1913 when she came to my office with the announcement that she could now read the newspaper which was impossible for her before the high frequency current was applied. As she absolutely refused to look forward to an operation so long as her vision was so good as it then was and the eyes felt so good, we again started treatments for the purpose of getting still further improvement, if possible. In July 1913, I refracted her for the first time and secured 20-20+1 vision with the right eye and 20-40 vision with the left eye. After treating the eyes at irregular intervals until August 28th, 1914, with the same lenses the vision in the right eye was 20-30+5 and in the left eye 20-30. This showed a slight deterioration of vision in right eye and an improvement in the left eye. By adding +.25 to each eye, the vision in the right eye was 20-20 and in the left eye 20-30.

The results in these cases are typical of those secured in other cases of the same diseases and to cite more would be but a repetition. About one year ago, the static machine was discarded and a transformer with a battery of four one-quart Leyden jars substituted. The source of energy is the 110 volt alternating commercial current. This current after leaving the Leyden jars is further changed by passing through a Tesla or a d'Arsonval coil as the case may require. Results with this apparatus are about as with the static machine.

Whether the d'Arsonval or Tesla current should be used can best be determined by a consideration of their physiological actions. Both currents are germicidal and may therefore be indicated in any of the infectious diseases of the eye. When the cellular functions and chemical processes are to be influenced with the idea of increasing tissue combustion, promoting osmosis and stimulating metabolism and elimination we must think of the d'Arsonval current. On the other hand, the Tesla

current would be indicated when the nerves of the sympathetic and vasomotor systems require stimulation. Bearing these facts in mind will probably enable us to see why the following mentioned diseases may be amenable to treatment. Strong, in his work "High Frequency Currents," speaks of trachoma, granular lids, glaucoma, cataract, ptosis, exophoria and incipient optic neuritis as being curable in certain instances. Crook, in "High Frequency Currents," tells of a case of trachoma and another of opacity of the cornea due to ulceration cured by this agent. Tousey, in "Medical Electricity and Roentgen Rays," speaks of trachoma and atrophy of the optic nerve as being sometimes curable. Mayou refers to the high frequency current as being of possible use in trachoma. Darier is of the opinion that, while the high frequency current is being used more frequently than formerly and is a valuable method, it should be more thoroughly studied. He refers to acne rosacea of the cornea, scleritis, sclero-keratitis, lupus of the eyelids and glaucoma as sometimes calling for this electrical modality.

It will be readily seen that here we have a remedial agent used to a small degree by some with a certain amount of satisfaction. It is not a cure-all nor yet a specific, but when called for does give remarkably good results and unquestionably should have a more thorough investigation. So, if by this brief recital of cases something new has been offered to some of you and a discussion of this neglected method of treatment be provoked, the purpose of the author will have been accomplished.

BUREAU OF HOMOEOPATHIC INSTITUTE AND CLINICAL MEDICINE

SOME CONSIDERATIONS IN THE TREATMENT OF CHRONIC INTERSTITIAL NEPHRITIS.

BY

J. BELLVILLE, M.D., PHILADELPHIA.

IN view of the fact that we are dealing with a pathologic condition which once initiated is continuously progressive the treatment naturally resolves itself into those measures which may delay this progress and those which combat the end results of the disease.

As in diabetes so in chronic interstitial nephritis diet is of the first importance but careful differentiation of conditions present and prescribing a diet adapted to the condition is essential.

An absolute milk diet is by no means as ideal as some consider it. In order to meet the energy requirements more than two quarts of milk per day is required. This amount of liquid with the addition of large amounts of water usually advised increases the volume of the blood a not inconsiderable factor as affecting the blood pressure and throws additional work upon an organ which needs rest, the kidney.

Proteid has always been theoretically considered undesirable for Nephritics and recent experimental work by Okie and Alford gives a basis of fact for this objection. They have found that proteid markedly increases the toxicity of substances which produces lesions of the kidney and liver.

The proteid intake should be kept well below 100 grams per day—60—80—or even less. Unless the appearance of indican in the urine shows imperfect digestion with consequent bacterial decomposition there is no reason why a part of this should not be taken in the form of meats—either dark or light. As the sclerotic process in the kidney may have as its starting point the absorption into the blood of the bacterial splitting of some of the amino acids it would seem a practical proposition to administer Lactic acid bacilli in some form in connection with the meats in order to inhibit the growth of the specific bacteria responsible for the development of these poisons. However in dealing with the question of diet in nephritis as in every other condition the first insistence must be upon a sufficient diet.

I have seen a water logged subject the anasarca being secondary to a dilatation of the heart, brought about by insufficient food, recover her lost compensation under a liberal diet containing meats as well as milk and vegetables and again go down this time to a fatal issue upon a strict routine diet.

A strict diet once instituted while it may accomplish a great deal in relieving toxemia needs careful watching lest compensation be broken.

Change of climate is frequently of benefit as these cases do better in an equable dry climate, sudden changes of temperature and excessive humidity interfering with the compensatory function of the skin, a not negligible factor. If possible relief from business cares and worries should be advised.

In cases not too far advanced light carefully regulated ex-

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ercise is of benefit. In more advanced cases where active exercise cannot be taken, massage is of benefit in improving the general nutrition of the patient.

The toxemia can only be met by a carefully supervised diet—hot vapor baths, wet packs to increase elimination through the skin. Colonic flushings on alternate days with the baths are advisable. The same caution in the use of hot vapor baths, etc., must be observed as with other treatment. The presence of dropsy, which is always indicative in these cases of a failing heart, being a contraindication.

The occasional flushing out of the kidney by ingestion of considerable amounts of water is also beneficial. Elimination through the intestinal tract is to be promoted by regulation of the bowels and occasional active cathartics—in extreme cases relatively large doses of calomel have been remarkably effective. Vomiting is best met by lavage; coma or convulsions are best met by pushing the treatment for toxemia, in addition sweating preferably by means of heat. Pilocarpin, unless contraindicated by the condition of the heart, venesection—followed by a normal salt infusion or enteroclysis.

Hypertension a constant accompaniment of these cases until rupture of compensation takes place can be met by absolute rest in bed lessening the amount of fluid ingested and administration of the nitrites. Here too constant care must be exercised and one may disregard a considerable tension provided the cerebral vessels are not involved and the heart muscle is functionally sound. It cannot be too strongly emphasized that too great a lowering of the blood pressure may do as much or even more harm than the high by interference with nutrition. The tissues become accustomed to taking their necessary elements from the blood under high pressure and too great a reduction leads to malnutrition the effect falling frequently upon the heart and initiating a dilatation. This is not a theoretical proposition but a clinical fact.

Rupture of compensation, dilatation of the heart with resulting general anasarca, does not always mean an immediate or even near approach of a fatal issue. Absolute rest in bed, a generous diet with material doses of digitalis will very frequently restore the heart and with proper management the case may be carried along for a considerable time.

I have not attempted to give a detailed summary of treatment but to file objections to routine treatment of any of the

conditions presented in this disease and a plea for the treatment of the patient and not the disease.

DISCUSSION.

DR. C. S. RAUE, Philadelphia: This excellent paper refers to some recent work that has been done in dietetics, and I would say that it is only within recent years that the subject of dietetics has been approached from the scientific standpoint. Most of our dicta on it are strictly empirical. A great step forward was made when the caloric value of foods was worked out, and also the caloric requirements of individuals under different conditions; but that was not enough to solve some of the mysteries of metabolic diseases. I think that investigators are now getting on the right track. The experiments to which Dr. Belville referred showed conclusively that laboratory animals that were being poisoned with certain kidney irritants exhibited a more pronounced kidney irritation under a diet in which proteins were given than when they were on a carbohydrate diet or one low in proteins. It is undoubtedly true that certain chemical poisons are influenced by the diet to a certain extent. In these experiments, lesions were also produced by uranium nitrate; and these lesions were aggravated by giving a fat diet. These experiments were performed by Opie, of Harvard. When one toxin is active proteins will intensify it; and when another toxin is active, it may be intensified by the carbohydrates or fats. If these effects are properly classified and worked out, we shall have a real scientific way of dieting our patients in the future.

One subject to which Dr. Belville did not refer—very likely because he had gone so thoroughly into everything else and took it for granted that we understood him—is the use of salt in nephritic cases. There is no doubt that in cases in which a tendency to edema of the tissues develops, it is advisable to cut down the sodium chloride in the food. This action of the mineral salts in the body is also a very interesting point that is being worked out more thoroughly in recent years. For instance, it is known that sodium chloride will act toxically in certain conditions; while if calcium chloride is added to the solution, the toxic effect of sodium chloride is overcome. If you want to get rid of the sodium-chloride concentration of the blood serum, you can do it by giving potassium in the form of fruit juice or potatoes. Very likely the potassium salts combine with the sodium chloride in the blood stream in a way in which they would not do in the test tube, are converted into sulphates, and are in that way

eliminated in the kidney. By pushing the phosphorus, you can get rid of the residue. I will go into that more thoroughly in a paper that I expect to read in a short time. I just wanted to bring out the importance of cutting down the sodium chloride in the diet in these cases, and also the better understanding of dietetics that we are promised in the future as the result of the experimental work that is now being carried on.

DR. W. H. PEARSON, Philadelphia: Our ideas regarding metabolism are undergoing a decided change from the generally accepted opinion. It has recently been shown that a wild fowl flying over the Gulf of Mexico carries more calories of heat than, according to our methods of figuring, its entire body weight; so our knowledge regarding metabolism must be rearranged, sooner or later, if we are going to explain in a satisfactory scientific manner seeming discrepancies.

DR. DONALD MACFARLAND, Philadelphia: What Dr. Pearson speaks of is some cases of saccharine diabetes that I have treated. These cases were not treated dietetically. I took the whole blood of the patient, dynamized it with distilled water and gave it to the patient. It seemed to cure the diabetes.

DR. ASHCRAFT: It is now seven minutes after eleven; and if there is no further discussion and Dr. Belville has nothing to add, we will close the Bureau of Homœopathic Institutes and Clinical Medicine, and proceed with our Business Session. The next order of business is the Nomination of Officers for the ensuing year.

BUREAU OF MATERIA MEDICA AND PROVINGS

THE POWER THAT CURES.

BY

ROBERT WALTER, M.D., WALTERS PARK, PA.

EXISTENCE, in its ultimate analysis, is made up of power and product, of which power is necessarily first, the product being the result of its operations. These are properly distinct, though often confused, empirical science frequently seeking to extract the power from the product instead of deriving the product from the power.

The power is an invisible potency, intangible but none the less real, a matter of inference purely, while the product being obvious and usually tangible, is ever before us—a subject of observation. As a consequence effects are observed long before the power that produces them is inferred, and so discovered, as the work of the great Newton clearly proved.

Power and product are the constituents of every science, whose work consists chiefly in determining their relations in detail. Science being a description of nature, necessitates that discovery of the power be the essential discovery from which we may proceed to deduce results preparatory to producing them.

Power is known in science as force, of which there are two classes, the exact opposites of each other in all essential respects, to distinguish which is a first step toward exact knowledge. Prof. W. Stanley Jevons (Univ. College, London) in his great work *Principles of Science*, well says:

“All logical inference involves classification” whose “value is co-extensive with the value of science and general reasoning;” and he quotes Professor Bowen of Harvard College, as saying:

“Perhaps it will be found in the sequel that classification is not only the beginning but the culmination and end of human knowledge.”

The two classes of forces mentioned, occupying opposite extremes in Nature, are well described as:

Inherent and Incidental,
Intrinsic and Extrinsic,
Producers and Produced.

The first class are known as chemical affinity, gravitation and vitality, the power of life. It is clearly proved, if not self-evident, that these are producers that cannot be produced; inherent in the constitution of the things in which we find them, without which the things could not have come into being nor can continue to exist; intrinsic, always operating from within, outward, so making all the processes of Nature to be evolution in its philo-logical and only true sense, and not involution, as a great modern sophistry seeks to establish.

The second class of forces, described as incidental, extrinsic and produced, are heat, light, electricity, magnetism, etc. These are products, and not producers; incidental to existence, but not essential; they constitute occasions of results but not

causes; they *induce* but never *produce*; and being a large part of our environment, they influence production, but never supply the power that produces.

In view, therefore of the value of classification as above quoted, what can one think of the so-called science or philosophy that jumbles these classes into one inexplicable mass, and makes them "all transmutable into one another, back and forth, without loss." Gravity, affinity and even life may be made to produce heat, light, electricity and magnetism, but are never transmuted into them, but the absurdity of supposing that these may be returned to the source whence they come, requires no argument or evidence, the idea of heat or light being transmuted into gravity or affinity being too absurd for consideration.

The forces mentioned are also properly classed as *causes* and *occasions*, the *cause* being defined as "that by the power of which an event or thing is," while the *occasion* is an accidental or incidental occurrence which brings into operation the cause. To distinguish between these is an additional step toward exact knowledge. Both exist in Nature and both are necessary to production, but which is which? Which is cause and which occasion? Which is power and which is product, is a problem whose solution is involved in all science.

Perhaps no two words in our language are so frequently confounded as the words *cause* and *occasion*, the cause of every result always being invisible, never a subject of observation, is invariably overlooked in any science based upon observation, as is medicine, while the occasion being usually obvious, is naturally mistaken by rustic ignorance for the cause; but that a learned man should devote a whole life time to the establishment of a system of philosophy based upon this fallacy, is entitled to be regarded as an eighth wonder of the world. And that medical science so-called, after two thousand years of study and experiment, should still continue a fallacious practice based upon this enormity is hardly less wonderful. It is no more reasonable to suppose that a drug supplies to the patient the power of cure than a park furnishes to a thousand tons of dynamite the power of the consequent explosion.

The truths thus set forth are especially applicable to any science of medicine. The power that cures is the same that made, and the process of cure is identical with the processes

of production; the power that made the organism is the perfect analogue of that which made the spheres, revolves them in space and around their axes, producing eclipses, tides, etc., gathers the waters together in river, lake and sea, carries up the mists to form the clouds, wafts them over mountain and valley and brings them down again in the form of rain; sails the ship or sinks it, enables us to swim or drowns us, brings water to its level or raises the waves mountain high, floats kite or balloon or dashes it to earth, and does a thousand other opposing and contradictory things in response to what conditions exist or occasions are supplied. This, indeed, is the work of gravity, one of Nature's great, original, producing forces, the cause of all astronomical phenomena, the discovery of which by Sir Isaac Newton was the true beginning of physical science. Thus Newton paved the way into which the chemists were attracted, and chemical science, in perfect analogy with that which is physical and mechanical, was the result. Chemical affinity is the cause and source of all chemical combinations and disintegrations, exactly opposite results being produced by the same force in response to opposite conditions. Chemical affinity makes dynamite and explodes it, and constitutes the force of the explosion, preserves our house or burns it to the ground, makes acid and alkali, heat and cold, electricity and magnetism, the very opposite results again being responses to opposite conditions or occasions. The cause or power that does the work is always from within the thing that works, any applications from without being occasions but never causes.

But Nature is a trinity, composed of three fundamental departments, as Sir John Herschel long ago showed, the living world being as truly a part of the original creation as the mechanical or chemical ever were. These three complete the circle and include the whole or natural existence, and existing side by side, having the same origin, developed by similar processes, are necessarily analogous with each other. It were an outrage upon human reason to disconnect human life, any more than gravity or affinity, from the source of all, as well as from the processes of creation, as some seek to do. Gravity, affinity and vitality are fundamental forces, derived immediately, not mediately, from the Great First Cause; for there is no other conceivable source, any other theory being an

affront to human intelligence as well as to Divine Revelation. And Prof. W. Stanley Jevons, before quoted, well says:

"The application of "Scientific Method" cannot be restricted to the sphere of lifeless objects. * * * * Whoever wishes to acquire a deep acquaintance with Nature must observe that there are analogies which connect whole branches of science in a parallel manner, and enable us to infer of one class of phenomena what we know of another. * * * * The physical sciences may be made the practice ground of the reasoning powers because they furnish us with a great body of precise and successful investigations. * * * * An interchange of aid most wonderful in its results may thus take place, and at the same time the mind rises to a higher generalization, and a more comprehensive view of Nature."

In the face of which truths who will say that vital science may not properly be developed on principles in perfect analogy with those of the sister departments? Who, indeed, will say that the phenomena of vital science are either more numerous or complex than are those of the physical realm.

We properly inquire as to the methods by which astronomy became an exact science; and the answer is astronomy is the product of the logical development of a great discovery, constituted of an original force, inherent in Nature, from which all mechanical phenomena are deduced. An identical discovery has yielded to us an exact chemical science; and we properly inquire, why not vital science be developed on the same principles. We have here a two-thirds majority,—two out of three departments have yielded exact sciences by *deducing* from primary principles what Nature has produced. No one questions the existence of gravitation, chemical affinity or vitality, invisible potencies though they are; and no one can doubt that they have been in operation throughout all time, why not therefore regard them as original, producing forces, the cause and source of all the processes and products of their departments.

"Scientific method" is the logical method; when science is based upon observation purely it is a fallacy and a fraud. The deceptive nature of appearance is an age-lasting phenomenon; only fools rest content with what they see.

But all things in accordance with law is the testimony of both Science and Revelation, and that the law distinguishes

with wonderful clearness between the apparent and the real, we all know, because Newton gave us proof.

But whence the law? Both science and philosophy agree in the recognition of a Great First Cause, as the source of all that is, law included, all of which however, exists in three fundamental departments, the product of three fundamental forces, always operating in accordance with fundamental and unchangeable laws, illustrative of the character of their author, to the nature and source of which we now turn.

Law is primarily the edict of a law-giver, and the Genesis of Revelation records three great edicts as the underlying basis of all that is. When God said, "Let there be light and there was light," He established the great original source of light, chemical affinity; and when He said, "Let a firmament be established and let the waters be gathered together," He established that great law of gravity which does these very things. And when He said, "Let the earth bring forth grass and the herb yielding seed," He gave forth the law which supplies not only all living things, but all the manifestations of life in whatever form they appear. These laws, separated by an intervening night, are thus shown to be distinct and separate sources of power, the three including the whole, the additional days being employed in the practical application of the principles just established. And as science is a description of Nature, proceeding from cause to effect, as Nature does, and not in the opposite direction, as does empirical science, a consistent knowledge of the three yields not only logical and exact science, but furnishes also the basis of a philosophy which shall not lose itself in bald agnosticism—a philosophy which shall become the basis of a reconciliation between science and religion, mind and matter, God and man—a philosophy which traces all results to the Source of All, and so shall not break the connection between the Great First Cause and His universe.

All things, therefore, being in accordance with law, an invisible principle of existence, makes this discovery to be the primal element of all science as well as of all productions. As thus employed the term includes the power that works and the method of its operations, both of which are obvious in Newton's formula. It is this which gave to us both astronomy and chemistry, and it is this which must yield to us a reliable vital science, if such is ever to be secured. Newton's law is expressed in the words:

"Every particle of matter in the universe is attracted to every other particle with a force directly proportioned to the mass of the attracting particles and inversely as the square of the distance between them."

While life's great law, the fundamental principle of an analogous department, couched in analogous language, the cause and source of all its productions, should yield equally reliable results.

LIFE'S GREAT LAW. *Every particle of living matter in the organized body has been produced, and is sustained, by a power of life, properly called vitality, endowed with an instinct of self-preservation, the effectiveness of whose work is directly as the amount of the power and inversely as the degree of its manifestation.*

The truth or falsity of this law will be proved by its application to the solution of all medical problems, success in which will answer to the needs of medical and hygienic science as nothing else has ever approximated. And the truth will be suggested, if not proved, by the fact that the conclusions of the law will be the opposite of what appears, and what has heretofore been accepted as reality. For Newton proved that the apparent and the real are opposed, a fact not more evident in the physical than in the vital realm. First, then, disease instead of being an enemy to be vanquished is, on the contrary, a friend to be encouraged. That most men sooner or later die of disease is no proof of its destructive nature, for how could it be otherwise when the learning and talent of our times are chiefly engaged in preventing the successful operations of the curative processes. It cannot be disputed that disease as well as health, is a process of life, which process may be carried forward with ease or dis-ease, with comfort or discomfort, successfully or unsuccessfully, and whether the one or the other depends upon the amount of the power possessed and the character of the conditions supplied. Instead of being opposed and thwarted by contrary medication, disease should be aided by that which is similar; instead of being treated by methods which deplete the power they should, on the contrary, recuperate it by methods which reduce activity and conserve power. The force of health and force of disease, we have seen, are identical, and both are the patient's vital force, seeking to maintain, repair and perpetuate the organism, and the difference between health and disease is one of environment

first, to be followed soon, in cases of disease, by depletion of the power through unfavorable environments, generally aggravated by unfavorable treatments, due to erroneous conceptions of the nature and processes of health and disease. Definitions are in order:

Health is the normal, easy and comfortable performance of the functions of life, due to favorable conditions and sufficient power; while

Disease, as the name implies, is abnormal, difficult and even painful performance of the same functions, due to unfavorable conditions with power insufficient to do the work easily under the conditions present.

But whether it be health or disease Nature's work is always self-preservative, preserving health or repairing injuries, but may be so diverted from its legitimate work by violent applications from without, such as drug poisons, cold baths, etc., as to greatly delay or even stop the process of cure, and prevent recovery, all the while the treatment yields relief because the sufferings being due to the curative process, is relieved by stopping the process. This is the work of all who operate according to appearances, unmindful of the law. Prevailing medical practice being wholly engaged in giving relief, makes invalids and prevents recovery, so yielding us five times as many physicians in this country, according to population, as there are in continental Europe, because of five times as much sickness; or how else shall we explain the paradox? Relief is, of course, the important element in every form of treatment, but this can be more readily secured by supplying favorable conditions and aiding the process of cure, as in homœopathy, than by stopping it through the use of violent appliances. Both plans may be effective, but the one means permanent recovery, while the other gives temporary relief only to necessitate renewed effort at cure at some future time.

The word *condition* is very generally synonymous with the word *occasion*, neither of which supplies any power, but only calls forth and expends what the patient possesses. Medicines, and other treatments, are occasions which supply or change conditions, as drugs always do, making the two words interchangeable in any discussion. It is, therefore, properly concluded that all results in Nature depend upon:

First, the power that produces, which in this case is the patient's power of life; and

Second, conditions for the operation of the power.

The power being from within and always invisible, is easily overlooked, while the occasions of the result, being usually obvious, are easily mistaken for the cause or power, a mistake which Mr. Herbert Spencer has undertaken to exalt into a philosophy. His theory that the power of life is produced from environment, and that all results are derived from external forces, if true, would justify the theory that all curative power resides in the medicines administered to the invalid, which medicines must be in sufficient dose to be effective; but let it once be conceived that the medicines supply no power of cure, but are only occasions which call forth the power already in the patient, and the crude dose is at once dispensed with. As an infinitesimal spark will liberate the power stored in a thousand tons of dynamite, or will start a conflagration that will burn a town, so an infinitesimal dose of medicine will start and continue curative operations in the worst diseases, provided only the patient possesses the power of cure. It were absurd to suppose that the power of cure resides in the drug; the fact that it is a poison destructive to life, contraindicates any curative virtues. On the contrary, when of a kind calculated to produce a similar disease, it arouses the vital powers to a more vigorous operation of cure, recognition of which truth will stop the constant tendency of the profession to increase the dose and so prevent recovery, instead of allowing the patient a reasonable chance to return to health by virtue of the power of cure inherent in him.

But results, it is to be noted, are not "directly" as the amount of the power simply, but inversely as the degree of its manifestation as well. On that word "inversely" hinges consequences inconceivably great in Life's Great Law as well as in Newton's. Power of necessity precedes product, the character of which corresponds to the amount of the power as well as depends upon its distribution. Hence all processes are properly employed to increase the power, in the attempt at which a most egregious error occurs, a recognition of which, it is believed, would soon double the average of human life, or at least empty a few insane asylums. The nervous diseases of our times in their infinite variety and disastrous consequences, would materially decrease or disappear once the forced manifestation of power is known to reduce its possession. Let it be clearly established that increased appearance of power in the

patient is power drawn from, not communicated to him, as is generally imagined, and medical theories and practice would undergo a wondrously beneficial revolution. This great truth was foreshadowed in that remarkable paradox of the Great Teacher: "He that would save his life shall lose it," a declaration which must no longer be regarded as extravagant hyperbole, but a fact of history that has been in active illustration for thousands of years. Increased manifestation of power, under an extremely narrow view, has for ages been mistaken for increased possession of it, and means are still everywhere in vogue seeking to increase this manifestation, not knowing that in doing so its possession is being correspondingly reduced. We protest that the physician is no more adding to a patient's power of life by increasing its manifestations through stimulation than the engineer is increasing the power of his engine by blowing off steam. Power is an invisible potency, its very existence being unknown except in the work it does, so that increasing the work increases the manifestation of the power, and correspondingly reduces its possession. We cannot eat our cake and keep it too; power manifested is power expended, while reduced manifestation, as in rest and sleep, is the true process of recuperation; and all treatments that would yield permanent benefits should operate as sleep does, by reducing manifestation and hoarding power. It is vital power that cures, and the rapidity and certainty of cure correspond with the amount of the power, so that all processes that would be permanently successful must accumulate or recuperate that power while nothing is done to deplete it. Bleeding and purging reduced the force of disease because they reduced the force of health, but provided for worse diseases in the reaction. The profession, realizing this truth, started on a new series of experiments, and for sixty years medical treatments of all kinds, pure homœopathy excepted, have been engaged in depleting the vital forces, especially nerve power, because they have mistaken manifestation for possession. The marvelous increase in number and violence of nervous diseases of our day, are due to nerve stimulation just as the choleras of the past were due to purging, and the frequency and virulence of small-pox, typhus, black death, etc., were largely due to impoverishment of the blood through bleeding.

But the manifestation of power which exhibits its expenditure is not confined to the use of tonics and stimulants, but is

a concomitant of a variety of things, especially the use of food. It is still believed that things without life can communicate the power of life to living things;—that it can give what it does not have. The digestion and assimilation of food induces work, and work expends power and so manifests it, but as we have seen, the manifestation of power reduces its possession. Food is material for the building up of structure, but it yields none of the building power. It is fuel to the organism just as coal is fuel to the boiler, but whoever heard of imposing more fuel and increasing the steam pressure as a means of repairing boiler or engine. Food is material destitute of life and so cannot yield what it does not have, but by combustion in the organism it yields physical force for the doing of physical work, but it is the organism that does the work and manifests the power, often doubling the blood pressure above the normal, giving an appearance of strength by the very processes which expend and exhaust it. Again we say, recuperation of power—a vital inheritance, possessed of all healing virtues, is secured through reduced manifestations as in rest and sleep, in which power is hoarded rather than expended as by activity, excitement and labor, which induce exhaustion and prevent recovery all the while they seem to be promoting it.

The things which seem to be are not,
And those which are seem not to be,
This world's a world of paradox,
We dare not trust e'en what we see.

The changeless moon seems changing ever,
The sun sets daily yet sets never,
The stars seem near and yet so far,
So small they seem, so great they are,
It is a world of seeming.

RICINUS.

BY

ANNA D. VARNER, M.D., WILKINSBURG, PA.

THE castor oil plant is a native of India and North Africa. It is cultivated largely in the West Indies and the United States. It attains the character of a tree in its native land but in this country only grows to be five or six feet high.

The fruit is a roundish glaucous capsule with three projecting sides covered with rough spines and divided into three cells, each containing one seed which is expelled by bursting the capsule. The flowers appear in July and the seeds ripen successively in August and September. A decoction or poultice of the leaves is sometimes used as a local galactagogue, and an infusion has been given internally for the same purpose.

The seeds are about as large as a small bean, oval, compressed, obtuse at the extremities, very smooth and shining, and of a greyish white color, marbled with reddish brown spots and veins. These seeds easily become rancid and are then unfit for the extraction of the oil which is acrid and irritating. Taken internally the seeds are powerfully cathartic and often emetic, three having been known to produce fatal gastro-enteritis in an adult. The active principle which pervades the whole kernel, is volatile and is an enzyme called ricin. It is neutral in reaction, and a violent poison.

Castor oil is obtained by expression. The capsule is removed, the seeds cleansed from dust, submitted to a gentle heat, then introduced into a powerful hydraulic press. The whitish oily liquid obtained is boiled in a considerable quantity of water and the impurities skimmed off. As they rise, a clear oil is left on top of the water. This oil is removed and again boiled with a small quantity of water until aqueous vapor ceases to rise. This last process clarifies the oil and renders it non-poisonous by driving off the acrid volatile matter.

This information we have derived from the *American Pharmacopæa*.

In Clark's *Materia Medica* we find an account of the drug *Ricinus*, the tincture of which is made from the fresh castor oil plant, while the trituration is made from the fresh seeds. The symptoms he records are as follows:

Vertigo, brain exhaustion, severe sudden occipital pain extending around to the back of the ears, eyes and forehead, with rush of blood to the head. Conjunctivæ injected, copious lachrymation, eyes convulsed and turned up, pupils moderately contracted. Buzzing and humming in the ears.

Face is pale, features contracted, drawn, with twitchings of the mouth. The tongue is coated white and is dry, and there is burning pain in the throat. Anorexia with great thirst, burning in the stomach, pyrosis, nausea and persistent painless profuse vomiting of a watery liquid, slightly colored by bile.

and containing a few mucous threads in suspension. Pit of stomach sensitive with burning in stomach and pains radiating from the center to umbilicus and hypochondria. Sensation of the weight of a bar across the stomach.

Rumbling in the abdomen with contraction of the recti muscles. Colic with a feeling as though the intestines were violently drawn together. Incessant diarrhoea with purging. Stools are of serous liquid mixed with mucus or blood. Rice water stools with cramps and chilliness.

Complete anuria, or urine scanty, dark, thick, highly albuminous.

In women the menses are early and excessive and they suffer with leucorrhœa. The mammary glands are thick, with swelling in the axillæ and pains running down arms. Thin discharge from breasts which becomes milky. Brings milk into breasts of virgins and women who have not nursed their children for years.

The pulse is very rapid, small and scarcely perceptible, or weak and not increased in frequency.

Pains in back like afterpains.

The patient is pale and listless with anæmia, profound adynamia, collapse, convulsions, muscular contractions, and very painful cramps in trunk and limbs.

There is pronounced jaundice of the skin with prurigo on wrists and bends of knees.

Great drowsiness, chilliness, free perspiration, limbs cool and moist, forehead covered with cold sweat.

The castor oil plant is used as an ornamental plant in this state, yet very few people even among physicians and druggists are aware of the poisonous qualities of the seeds.

Within two years I have had three cases of poisoning, one of which proved almost fatal, and it was while searching desperately for an antidote of which there are none given, that I obtained knowledge in regard to Ricinus.

Two children, aged 5 and 3, ate several seeds each at 10 A. M. The family felt no alarm until four hours later they began to vomit, continuing to do so almost incessantly for six hours. The substance vomited was thin, watery, foamy, slightly discolored yellow, with the odor of green willow, and contained some thin glary mucus. The children were lying on the same bed with a large washbowl between them, and when one was not using it the other was. There seemed to be no retching or

nausea. The attacks were sudden, violent, over quickly only to begin again. During the intervals which were only a few minutes' duration the patients lay listless, clear mentally, but too exhausted to give attention to anything. Their faces were pale and bathed in cold perspiration. Pulse in each case was thin and thready. They complained of thirst and some pain or distress in epigastrium. After vomiting for about four hours they began to have frequent watery, painless evacuations from the bowels, purging and vomiting at the same time. The vomiting ceased at 8 P. M. and the diarrhoea after midnight.

The following day the older child brightened up, took a little food, and from then on rapidly recovered. However during the following three months she had occasional attacks when she vomited a yellowish, watery substance with the characteristic odor of green willow.

The other child lay limp and lifeless for three days, refusing all food, after which he began to improve and made a slow recovery.

After consulting books, druggists, physicians, in vain for an antidote, I prescribed arsenicum. In the meanwhile we called in the oldest allopathic physician in town thinking he might have some experience in the matter. He wrote a prescription the substance of which was bismuth. We gave two doses which were promptly ejected from the stomach, then we went back to the arsenicum 200th potency giving it in drop doses on the tongue until we began to get results. Veratrum might also be thought of as an antidote.

Last winter I was called early one morning to see a young woman who was vomiting violently and frequently. A thorough examination and questioning as to diet revealed no cause for the trouble. She seemed puzzled herself as she had never vomited in her life and had retired the night before in perfect health. While waiting for a glass of water in which to prepare the medicine, I noticed a small box on the table containing moss, cotton pods and other things which she had received from Florida the day before. She remarked that there were some nuts in the bottom, and she had eaten one. Now *what* she ate was one castor oil bean. That was at 12 P. M.. At 3 A. M. she was awakened with a sudden desire to vomit. She had no pain, no headache, no nausea. She first ejected the contents of the stomach and

later a yellowish, watery, bitter, slimy fluid, repeating the act every fifteen minutes, and feeling no discomfort in the meantime. Gradually langour and weakness overcame her, her face was pallid, her body covered with a cold sweat. At 6 A. M. she began purging and vomiting simultaneously. Her stools were frequent, painless, and like rice water. The urine was dark and scanty, her pulse was weak and thready, and she craved for water which she could not take. I prescribed arsenicum which relieved her symptoms in a short time, though she suffered from exhaustion for a day or so afterwards. The first food to be retained on her stomach was very small quantities of very hot milk well salted. Craved salt which she could have eaten by the teaspoonful.

Physiologically therefore ricinus has a profound action on the gastro-intestinal tract causing an inflammatory condition, and pouring out a profuse serous exudate. Consequently in potentized form it should be as valuable a remedy as either veratrum alb., or arsenicum in cholera, cholera infantum or gastro-enteritis.

CALCAREA FLUORATA.

BY

EDWARD CRANCH, M.D., ERIE, PA.

CALCAREA fluorata, or fluor spar, is a mineral brought in quantity from Greenland, and perhaps from other regions. It occurs in more or less transparent rhomboid crystals, having remarkable powers of refraction, a crystal one and one-half inches thick will refract an object, showing a double image, separated by at least one-half inch, the images approaching one another as the crystal is rotated on its axis. Fluor spar is the source of hydro-fluoric acid, used as a vapor in etching glass, and in combination with various bases forming the fluorides of commerce, some of which, those of sodium and potassium, are valuable as insecticides, and are strongly antiseptic. The fluorides are credited with causing goitre in animals, and they have been used with considerable success in removing goitre when present in the human species, as the present writer has verified with the *calcareo fluorata*, used in the 6x and in the 200th potencies.

The calcarea fluorata, in the potencies mentioned has been of frequent valuable aid in correcting the weakness and daintiness of appetite, and distress after eating (no severe pain), with some nausea, that has occurred in cases of young or half-grown children, who have been well cared for, but apparently over-taxed by their studies, in the kindergarten and primary schools.

With those of any age who have spells of acute indigestion from fatigue such as night-watching and brain-fag, and in whom there would be long spells of troublesome flatulence, sometimes seeming to be an inherited weakness. The flatus has no odor, as a general thing, but is remarkably persistent, no matter what is eaten. It is specially apt to be worse during pregnancy.

The patients favorably affected by calcarea fluorata are generally weak and inclined to anæmia. They are easily chilled, and require to dress warmly. Thirst is not marked, and the bowels are generally in good order.

Hemorrhoids, non-bleeding, or bleeding, swollen and painful, associated with varicosities and varicose ulcers on the limbs are found benefitted.

The swelling of periosteum and ligaments after fractures, blows, and dislocations, with slow healing of wounds are also good indications.

Scar tissue following burns and other lesions, as adhesions after operations, with stricture of intestines, have been benefitted, though surgical assistance may have had to be called later. Used after operations the tendency to adhesions is reduced.

It is essentially a "chronic" remedy, and often requires some weeks' use before it shows much effect.

In indurated glands, as adenoids, and cervical glands, and in exostosis and sarcoma, and in indurations of the breast, it has been tried by the writer, but found wanting in the cases it was tried upon, for these conditions. Possibly its use was not long enough continued.

AN INTERESTING CASE OF BEZOLD'S MASTOIDITIS.**BY****GILBERT J. PALEN, A.B., M.D., F.A.C.S., PHILADELPHIA, PA.***(Read at the November Meeting of Philadelphia Eye, Ear, Nose, Throat Society).*

THE average case of mastoiditis presents a very distinct history of acute or chronic middle ear suppuration with aural discharge. The examination of such a case shows a perforated ear drum, and discharge, varying in character and amount. Subsequently, pain and tenderness and other classical symptoms of mastoiditis. Now and then there comes under observation cases which are lacking in many of the typical symptoms and signs. These cases, while suspicious, are doubtful. It is such cases which test our judgment and force the use of all known methods of diagnosis. Were it not for these unusual cases, our work would be one of dull routine. The following case is one which belongs to the class of unusual and should therefore prove interesting to others as it has to myself.

The patient was a young man, twenty-four years of age. He consulted me October 15, 1914. Three months before this, following a cold, he developed a snapping in the left ear and slight pain, but at no time discharge. This snapping continued until three weeks ago, when pain developed in the left side of the face and over the mastoid process. At the same time, a swelling appeared in the region below and behind the auricle. This pain was worse when attempting to chew and there was considerable difficulty in opening the mouth. There was no evidence, either subjectively or objectively, of middle ear involvement other than slight pain, the snapping sensation and the functional examination as stated below.

At the time of the objective examination, the findings were as follows: A narrowing of the posterior canal wall in its outer portion, the inner portion being normal, as was also the drum. There was a swelling in the retro maxillary fossa, which did not cause displacement of the auricle. While this was brawny, it felt upon palpation as if it were confined to the parotid gland; and, as the tip of the mastoid was not masked, the diagnosis of Bezold's mastoiditis was doubtful. It appeared more as a swelling of the parotid gland.

Upon very accurate testing, the hearing was normal, the

only evidence of a middle ear condition was the result of Weber's test, the tone of the fork being referred to the diseased ear. It was impossible to confirm this by Rinne's test.

The case was placed in the hospital under observation. The temperature and pulse were normal, the patient being well in every way, except for the slight tenderness in the neck. The blood examination was normal. The next day a roentgenograph was taken. The report received from this on the following day, showed very clearly, a breaking down of the cells in the lower portion of the left mastoid process. On the evening of this day, the temperature rose to 101 degrees, returning to normal the next day. At this time it was found that the tip of the mastoid could no longer be outlined; and, that there was considerable sensitiveness at this point. The case was operated immediately. Upon dividing the fibers of the sterno mastoid there was a considerable flow of very liquid, green pus. The mastoid antrum was exceedingly small, the sinus well forward and the inner upper portion of the mastoid process sclerotic. The mastoid process, external to the antrum was sclerotic, there were, however, a large number of cells above the antrum between the inner and outer plates, above the temporal ridge. The mastoid tip consisted of one large pus cavity filled with granulations and pus, the pus being ejected from the mastoid cavity under marked pulsation. A large smooth edge fistula was found in the mastoid tip on the inner surface. The lateral sinus was exposed and this was covered with dark spongy granulations.

INDICATIONS FOR THE USE OF PITUITRIN. Puppel says Pituitrin is indicated in secondary weakness of the pains in the expulsive period with normal pelvis in face or cephalic or podalic presentation; in cases of delayed labor; in lateral placenta praevia, after rupture of the membranes, also when the placenta praevia is central after using the metrecrurter; in post partum atony; as a prophylactic measure in hebosteotomy or Cæsarian section, either classical or cervical.

It is contraindicated in abortion of every form; in contracted pelvis before engagement of the presenting part; in asphyxia of the child; in threatened rupture of the uterus; in faulty position of the child; in heart and kidney affections, as also in eclampsia.

Its action is inconstant in primary weakness of uterine contractions; during the period of dilatation; in premature delivery; in premature rupture of the membrane—*Monatschrift* Vol 38—399.

EDITORIAL

THE USE OF "TWILIGHT SLEEP" IN OBSTETRICS.

DURING the past few weeks a very active campaign has been carried on through the medium of popular magazines and public lectures to impress upon the public the advantages to be derived from the employment of so-called "twilight sleep" during childbirth.

As physicians are likely to be consulted quite often in regard to this matter, a brief statement of the method as well as its advantages and disadvantages, may not be out of place at this time. The method, as now used, was developed at the University of Freiburg, and is based upon the fact that scopolamin and morphine administered together at certain intervals are capable of producing analgesia and amnesia. The amount of morphine employed is usually about one-sixth of a grain, with 1-160 of a grain of scopolamin. These doses are repeated every three or four hours if necessary and if the condition of the patient seems to render it safe.

If we may believe the enthusiastic accounts that are given by some of the patients who have undergone this treatment during labor, "twilight sleep" has done a great deal to relieve childbirth of its pain and suffering. Not only is this true, but the mental and physical exhaustion that is usually attendant upon childbirth seems in many cases to have been largely eliminated.

It is not possible, however, to base any accurate judgment on the desirability of the general use of scopolamin-morphine injections in childbirth upon the statements of comparatively few women, many of whom were, no doubt, desirous of reporting favorably on the new treatment. Even granting that relief of pain was attained in all cases, there are other factors that must be taken into consideration before the method can receive general professional acceptance.

That the method is not free from dangers would seem to be

indicated by the fact that even those who are most enthusiastic in urging its use, insist strongly that only the physician who has had special training is competent to handle the method. If the method is harmless, we see no reason why special training is necessary for its successful employment, as there is no great mystery about the action of either morphine or scopolamin, and any physician of average intelligence should be able to successfully employ the method after the dosage and indications for repeating the drugs have been explained to him. That certain unpleasant effects are present in a certain proportion of cases at least is admitted by all. These consist chiefly of marked reddening of the face, extreme restlessness and incoherent muttering or delirium which, to the family at least, are often very disconcerting. The restlessness and delirium are sometimes very marked, and in some cases two or three persons are required to keep the patient in bed or at least in the proper position for delivery during labor. That labor is prolonged from three to six hours is the observation of many who have employed the method and, in some cases uterine inertia has been quite marked.

As far as dangers to the child are concerned these seem to depend chiefly upon the prolongation of the second stage of labor, induced by the scopolamin and morphine injection, rendering the child more likely to asphyxia. Where repeated doses have been given there is evidence of transmission of the drugs to the child, resulting in twitching and stupor lasting from twenty-four to thirty-six hours.

The general opinion among obstetricians who are not personally interested in extending the use of this treatment—and whose opinion, therefore, can be looked upon as unbiased,—seems to be that the routine use of scopolamin-morphine injections in general medical work for the purpose of relieving the pains of childbirth, would increase the dangers both to the mother and child. That the method may be of advantage when carefully employed in a selected group of cases, is generally conceded, although some obstetricians contend that in such cases, the use of ether or of chloroform is preferable. That the use of scopolamin-morphine injections are destined to prove the boon of suffering women that the skillful advertiser or popular lecturer would have us believe, seems very improbable.

G. H. W.

A COMMUNICATION.

GILBERT J. PALEN, M. D.,
State Society Editor,
HAHNEMANNIAN MONTHLY.

MY DEAR DOCTOR:—

You had a few things to say in a recent issue in reference to "Medical Organization." Did those of our readers who read that, or who are reading this, consider how it might possibly apply to their individual selves?

Every man or woman who really believes in medical advancement, every man or woman who is really interested in the special advancement of homœopathy, every man or woman who is a member of our school should fairly and squarely face the proposition of their individual responsibility.

Things are not exactly as we would like to have them, are they? The forces of homœopathy have not been organized in a manner to make the real contribution that Hahnemann made to the cure of human ills as effective or universal as it should have been. How much of this is your fault? How much of it is the result of defective organization?

Whatever the merits of any proposition, it requires organized efforts along the lines of most effective work, to make that proposition bring forth its best results.

Let us "fess up." The old school has "beat us to a frazzle" in the matter of the more efficient organization of their medical forces. They have forced matters so that an individual doctor is not in good ethical standing unless he is a member of his County, his State and his National organizations. This is right: this is the only rational and practical basis upon which effective medical organization can be preserved.

The Homœopathic School has been shamefully negligent as to the fact of its members associating themselves with the organizations that represented its school of practice. There is no penalty for neglect to join our medical societies, except as every individual penalizes himself by shrinking up and missing the opportunities that are thereoffered. There may be an insufficient premium offered to join our societies by reason of the infrequent interest and attendance of the very persons who might make the meetings more attractive and profitable. As a matter of fact, do not the hardest "knocks" that are made at any of

our medical societies generally come from those who have made the least effort or sacrifice to make that society attractive?

That more efficient organization would contribute to bring about results desired by all of us, cannot be doubted.

This more efficient organization will not come about automatically; no one outside of our own ranks can create it for us: it must be a matter of growth and development within and of our own ranks.

While not desiring to "knock" or criticize, I am inclined to attribute the principal reasons of our failure to create and maintain organizations proportionate to our professional ranks to the following: 1st, inadequate funds to employ men for "field" or propaganda work; 2d, the apparent failure of the A. I. H. to make any sustained effort to have the County, State and National medical organizations of our school to become distinctly representative or to really articulate; 3d, we have delegated to perhaps a too great degree to the old school the job of acting the "Medical Policeman" to the entire medical profession. The 4th reason, perhaps the most potent one, the indifference and inertia of so many of our school to everything except their personal practice, has in a greater measure been overcome in the old school by reason of their superior equipment and organization.

It seems almost puerile to discuss the academic reasons of the need of professional people who have common interests, needs and ambitions getting into an association and organization that will render them more efficient, that will protect their special interests better, that will render them more efficient servants to the human race. The application of the principles of homœopathy to scientific therapy started with Hahnemann; but those of us who have confirmed the fact that he made a contribution to the cure of the sick, not adequately taught in any but the distinctive colleges of the Homœopathic School, have a very serious and important duty to perform. We must be aggressive, we must not haul down the flag until the entire medical world affords a sympathetic and adequate teaching of one of the methods of curing the sick, as outlined by Hahnemann, that they have previously given inadequate attention to.

Let us sound the "GET TOGETHER" slogan, let us sound it good and loud and keep sounding it. Let every man and woman who reads this try and discover his or her duty in the matter and do it.

Fraternally yours,

Chester, Pa.

D. P. MADDUX.

GLEANINGS

WHAT THE GENERAL PRACTITIONER SHOULD KNOW IN THE SPECIALTY OF EAR, NOSE, AND THROAT.—M. Lubman presents a very practical review of this subject in a recent issue of the "Medical Review of Reviews" which we reprint in some detail:

Ear.—The external auditory meatus is a little more than one inch in length from the concha; its outer two-thirds are fibro-cartilaginous, while the inner third is osseous. The canal is not straight in its course, for as it extends inward it forms a slight curve with the convexity upwards, the summit of which is situated at the junction of the outer two-thirds with the inner one-third; it is evident therefore that when one desires to examine the canal, the auricle must be pulled upwards and backwards to straighten out the canal. In children however the auricles should be pulled only backwards. In examining the ear the following points should be observed: Always use the largest possible speculum which will comfortably enter the canal; be gentle in your manipulations as the canal is exquisitely sensitive; do not force the speculum further than the junction of the cartilaginous and bony portions.

Foreign bodies are common, especially in children, and, as the routine method of removing them is by syringing, it may not be out of place to mention a few counter indications for such a procedure. When the foreign body is of such a nature that it may swell up from the moisture; or so situated that it may be driven further inwards; or when the canal is swollen and inflamed as the result of previous ill attempts to remove it; or when the syringing produces dizziness, vertigo, etc., or when the foreign body is deeply placed, syringing should be avoided or stopped.

Insects quite often enter the canal and they produce a very uncomfortable sensation. Alcohol is here of service, because it intoxicates them, and later permits their removal by syringing with hot water. Solid substances must be removed with instruments, of which there is a great variety.

When a patient complaining of pain in the ear presents himself it is of importance to ascertain whether the middle ear is involved, or whether it is an otitis externa, because of the variation in treatment. The following are the distinctive features of an otitis externa: Pulling the auricle up and down will make the patient cry out with pain; pressure in front of the tragus will likewise cause pain; the patient will complain of pain during mastication; the anterior or posterior auricular glands may be swollen, depending upon the situation of the lesion. When the diagnosis of an otitis externa is established syringing the ear is inadvisable, as nothing can be accomplished by it, except, perhaps further infection in the canal. The best treatment includes packing the ear with gauze; such packing

should extend a little beyond the inflammatory region. The packing lessens the swelling in the canal and produces an anemia of the inflammatory region thereby possibly aborting it if applied early enough. The packing must be removed within 12 hours and replaced. Some patients refuse this treatment on account of the additional pain produced by the pressure. Under such conditions a piece of cotton saturated with Liq. Bunowi is inserted into the ear by means of an applicator. The wet dressing thus produced is soothing and at the same time keeps the canal open. This wet application should be changed every hour by the patient. If the process should go on to abscess formation, its incision is to be followed by cleansing with peroxide and drainage secured by means of gauze. At this stage particularly syringing is contraindicated.

Eczema of the auricle as well as of the external canal should be treated with very mild sedative medications. Irritants are to be avoided. In the early stages a little balsam of Peru with zinc oxid ointment will cure the eczema in a very short time; in the later stages however a 2%-4% silver solution is needed. Medication of greater stimulative power may be added when necessary. The eczematous area should not be washed with water, as the water acts as an irritant and helps to spread the disease. The affected part should be protected from scratching; but if the itching is of a very intense nature, cocain in a very mild form may be added to the salve.

Itching in the external canal is a common complaint; and, as there are numerous etiological factors to produce it, the treatment must be directed accordingly. There are some cases, however, in which the cause is not ascertainable for the canal looks quite normal upon examination. In such cases the throat will reveal a thickened hypertrophied posterior faucial pillar, which by a reflex action through the Eustachian tubes causes the itching. Cauterizing this pillar a few times will alleviate this distress.

Polyps in the external canal are quite common in chronic purulent otitis media where treatment has been neglected, and are usually indicative of a destruction of bony tissue. Under no circumstances, therefore, should such polyp be removed until its origin is known or its pedicle is distinctly seen.

Impact cerumen is quite common with some people who complain of a sudden deafness which is only temporary. Such a history does not suggest labyrinthine disease. On finding the wax in the ear, test its consistency with a diagnostic probe; then if it is soft syringe it out with hot water; if it is quite hard, use drops of peroxide of hydrogen for a day or two to soften it; then wash out with hot water. When the canal is clean it should be dried with cotton and either bismuth or boric acid powder insufflated, as the canal is likely to be inflammatory from the pressure of the wax. If the patient still complains of deafness inflation is indicated for a short time.

In order to interpret the pathological conditions of the tympanic membrane it is important to have a clear picture of its appearance in the normal condition. The drum membrane is of a pearl-gray color.

Pathologically the pearl-gray color disappears and one observes a congestion the whole length of the malleus, or the drum may be red, suggesting a diagnosis of an otitis media acuta.

The course of an ordinary uncomplicated acute otitis media covers a period from two to six weeks. Frequently the case may be protracted for a much longer period, particularly among children afflicted with adenoids. Under such circumstances the adenoids should be removed, for the tubotympanic catarrh may keep up the discharge indefinitely. If during the course of treatment there should be elevation of temperature, mastoidal pain, prostration and headache, then the mastoid process is involved. Immediate operation may be necessary. Even if the child should not complain and there should be no elevation of temperature, with the discharge increasing instead of diminishing under the treatment, and with pain over the mastoid and emissary veins elicited only by deep pressure, the mastoid should be operated on, for the increased discharge indicates that the mastoid is being destroyed and that its discharge is deflected through the middle ear.

Acute otitis media is almost always accompanied with pain in the mastoid region. This pain, however, usually subsides after free drainage is established.

Otitis media purulenta chronica has a wide field in medical treatment, but since the surgical treatment is prevalent, I will not enter into the subject. One thing however must be carefully remembered: syringing is incorrect treatment, because it does actual harm, as the water acts as an irritant in the middle ear, stimulates a growth of granulation tissue that may block up the whole canal. If the secretion has no exit it begins to putrify and destroy the bony wall. All this may lead to serious complications requiring radical surgical procedures.

Nose.—In spite of the important functions the nose has to perform in the body it is always considered as an external organ, and therefore very little significance is attached to its ailments. Every discharge from the nose is considered a cold; and since the ailments of the nose produce very little constitutional disturbance, treatment is often neglected or not advised. This is a grievous error.

In a child with a history of mouth-breathing, steady muco-purulent discharges from nose, adenoids are naturally suspected.

When an examination of a chest reveals bronchial breathing in a small area in the third and fourth interspace, nasal obstruction must be considered before pronouncing him or her as tuberculous.

In examining a patient complaining of some obscure illness and having a sunken nose, the nose should not be regarded as of syphilitic origin unless other conditions which may cause the same deformity are ruled out. An abscess on the septum which destroyed the cartilage, or a contusion or fall on the nose after a submucous resection or the entire removal of the support of the nasal bridge by a submucous resection may cause a similar sinking of the bridge.

Epistaxis is quite common in old and young, and may be due to an atrophic rhinitis, or to constitutional diathesis. The hemorrhage is usually controlled by pressure, i. e., packing the nose with gauze for from twelve to twenty-four hours. On removing the packing the hemorrhage sometimes reappears and repacking becomes necessary. The bleeding in the majority of cases is from the septum in the cartilaginous region and it is simple to find the bleeding point by gently wiping the blood away with cotton on an applicator. The bleeding point once located a piece of cotton

moistened in a 10 per cent. solution of cocaine is spread on the septum for a few minutes. Upon removing cotton the bleeding point is to be cauterized with chromic or trichlor acetic acid.

Ozena usually accompanies diseases of the sinuses or ethmoidal-sphenoidal cells and requires surgical interference. To relieve the patient of the obnoxious odor, spraying the nose with a solution of 50 per cent. of hydrogen of peroxide followed with a spray of iodine, one grain to the ounce of water, is very helpful.

The nose has three meatuses, inferior, middle and superior. The inferior has only one opening, the lachrymal duct which is about a half inch behind the anterior border of the inferior turbinate. The middle meatus is the largest; it presents the orifice of the antrum and the infundibulum and receives the orifices of the ethmoidal cells. The superior meatus has a single opening which receives the drainage from the posterior ethmoidal cells and conducts it downwards and backwards toward the nasopharynx. It is therefore of importance to note in which meatus pus occurs. If the pus comes from the frontal sinus it will be seen between the middle turbinate and the external wall of the nose; pus coming from all of the anterior ethmoidal cells will also be seen in the same locality, but there will be missing the subjective symptoms of frontal sinus involvement; pus coming from the antrum of Highmore drops into the middle meatus, but it will be lower and further back.

Asthmatics or epileptics should always have the upper respiratory apparatus carefully examined for polyps or adenoids.

Severe frontal headache during an ordinary rhinitis arises because the middle turbinate is edematous and presses upon the infundibulum, thus preventing or obstructing the secretions from the frontal sinus. A spray of adrenalin chlorid 1 to 5 or 6 thousand will quickly relieve such condition.

A chronic morning cough, with the mucus brought up with difficulty, and accompanied by temporal pain from the effort of coughing and quite often a stitch in the side, is very suggestive of an ethmoiditis, and the treatment should be directed to this region.

To syringe the nose for any reason only an atomizer should be used, because through the use of ordinary syringes or the simple snuffing up water from the palm of the hand, the water may enter the ear through the Eustachian tubes and cause an acute otitis media.

Pharynx.—A constant cough with a sensation as if that something lay in the throat may be due to an elongated uvula, which by its to and fro motion in ordinary respiration irritates the posterior pharyngeal wall and causes an irritation.

Dryness in the throat with a dry glossy pharynx, anemic in its appearance (a pharyngitis sicca), is due usually to the extension of an atrophy in the nose; and also quite often from an ethmoiditis which requires surgical treatment.

A fish bone occasionally may be lodged in the throat, usually near the glosso-epiglottidean fold. It is easily removed with forceps when the patient appears promptly. A patient often will still complain that the bone is present even after he has coughed it up or vomited it from the treatment he applied before consulting the physician. This irritation produced by

the bone may be relieved by applying a weak solution of cocain to this irritated region. It is helpful to give Tr. Ferri chloridi in glycerin to be taken every few hours without any water.

A choking sensation in the throat attributed to the larynx, together with a feeling of dryness after an ordinary conversation lasting for a very short time, is generally due to a hypertrophid inguinal tonsil causing pressure upon the epiglottis. Surgical removal of the hypertrophid tissue brings immediate relief.

An acute tonsillitis can quite often be aborted by painting the tonsil with Tr. Iodin a few times a day, followed by a gargle of iodine about two grains to the ounce of water.

Larynx.—Excluding any growths, tumors, specific disease, and tuberculosis chronic laryngitis is always a secondary manifestation of some pathological or mechanical obstruction higher up in the respiratory tract. Local treatment therefore, to the larynx with sprays and local applications of various medications will not relieve the condition. The cause must be determined and relieved while the larynx is locally treated.

HEREDITARY SYPHILIS.—In a paper on Hereditary Syphilis, by Jeans and Butler, the following summary is interesting:

"As a social problem, hereditary syphilis assumes relatively large proportions, one patient often representing a number of individuals needing treatment.

"Parents are frequently indifferent and fail to continue treatment. They also frequently fail to see the importance of having Wassermann tests made on the other children of the family, who may seem perfectly well, but who may have syphilis. In the case of such parental indifference such tests or treatment should be enforced.

"Hereditary syphilis is more frequent in illegitimate than legitimate children.

"The mortality is higher in illegitimate syphilitic infants than legitimate syphilitic infants.

"Hereditary syphilis in St. Louis is from two to three times as frequent in the colored as in the white race.

"The frequency of hereditary syphilis is greater among the infants in our clinic than among the older children.

"The waste in potential life by miscarriages and deaths in syphilitic families is twice as great as in non-syphilitic children.

"Thirty-three per cent. of the syphilitic children over one year had permanent disabling damage. Eighteen per cent. of the syphilitic children over one year had long-continued temporary disabling damage.

"There is about five times as much feeble-mindedness in syphilitic families as in non-syphilitic families.

"The mortality for artificially fed syphilitic infants is five times as high as for breast-fed syphilitic infants, not including deaths due to intestinal disturbances."—*Amer. Journal of Diseases of Children.* Nov., 1914.

VACCINE TREATMENT IN PERTUSSIS.—By W. Morgan Hartshorn, M. D., and Henry Nicholas Moeller, M. D.—The treatment of pertussis with vaccine is still in an experimental stage. This is due, in the first place, to our

lack of definite knowledge regarding the bacteriology of pertussis, and, in the second place, to the comparatively small amount of reliable data upon which to base conclusions regarding the proper dosage of the vaccine and the best mode of its administration, i. e., how often and how much.

Although the Bordet-Gengou bacillus is generally regarded as the most important etiological factor in this disease, yet, according to Williams, we cannot accept it as the proven specific cause. Not only the Bordet-Gengou bacillus, but many organisms of the hemoglobinophilic group of bacilli are also found in the cases observed; no specific lesion has been demonstrated in man or in animals which can be considered characteristic, and, in addition neither the agglutination nor the complement deviation tests are dependable (Wollstein). Accordingly, the preparation of a suitable vaccine must be determined by the bacteriology of each case. It is on this account that better results should be expected from the use of an autogenous rather than a commercial vaccine. The difficulty in obtaining an autogenous vaccine in cases of pertussis is responsible for the production of a variety of stock preparations, some of them consisting of pure cultures of the Bordet-Gengou bacillus, others being a combination of Bordet-Gengou, staphylococci, micrococci catarrhalis and of the influenza bacillus. The use of a combined vaccine of this type may be justifiable in that no harmful effects have been observed and that a certain number of cases are reported as responding favorably, but it can hardly be considered a logical treatment. It is more of the hit or miss order.

CONCLUSIONS.

From the literature reviewed it seems fair to draw the following conclusions. 1,445 cases observed and reported:

- (1) There is not an universal endorsement of pertussis vaccine.
- (2) A variety of vaccines are being used without definite knowledge of the bacteriology of the individual cases treated.
- (3) There is a striking lack of negative reports.
- (4) Apparently the vaccine is harmless in uncomplicated cases.
- (5) There has been established no definite standard for dosage or for treatment.
- (6) The dosage generally used has been apparently too small.
- (7) The course of the disease in the majority of cases reported has not been much under six weeks.
- (8) Its value as a prophylactic agent is still undetermined.
- (9) It is generally conceded that the earlier the treatment is given the better the result.
- (10) The vaccine treatment is worthy of a more extensive trial.

Conclusions drawn from the treatment with vaccine of 18 of our cases of pertussis:

- (1) A certain number of cases will respond favorably to a commercial vaccine.
- (2) Where a commercial vaccine has not proved successful it would seem desirable to try an autogenous vaccine.
- (3) The initial dose should be at least 50,000,000 in older children,

and this may be doubled at subsequent treatments up to 400,000,000 at five-day intervals. Further observations regarding dosage indispensable.

(4) A certain number of cases will not respond favorably to a vaccine, and in those it should not be continued after a trial of four doses.

(5) The relative value of the combined vaccine as compared to the single culture vaccine is undetermined.

(6) In that the improvement in a few cases was immediate and striking, it seems fair to suggest, but not to recommend its use.—*Archives of Pediatrics.*

SYPHILITIC INITIAL LESION OF THE CONJUNCTIVA OF THE UPPER LID.—

The patient, aged twenty-six years, came with conjunctivitis. There was marked congestion of the conjunctival vessels, with reddening of the upper fold at the outer canthus. Increased lacrimation; no photophobia, blepharitis or squamosa. In about one week the slightly edematous upper lid was everted, the patient looking strongly downward. Near the lacrimal gland there appeared a pin-head sized delicate gray-white surface from which was wiped a fibrinous deposit. The lid swelling then increased. The lid margin became of a light violet color and the lid felt thicker on eversion.

In the place of the small excoriation, there now appeared an ulcer three or four m.m. wide with indurated eyes. The conjunctiva was chemotic and not movable over the sclera; the preauricular glands were swollen. Antisyphilitic treatment resulted in recovery in three weeks. In three years the patient has suffered no other manifestation of the disease. New Year's eve the patient had been kissed on the eye lids by a strange woman. Soiled hands were not excluded as a contaminating cause.—*Dr. Theo. Fisher, Annals of Ophthal.*

WILLIAM SPENCER, M. D.

THE INFLUENCE OF AGE UPON THE OCCURRENCE OF CARCINOMA.—Thielhaber says the fewer cells possessed by connective tissue, the easier does the epithelium enter it. Young connective tissue is rich, very rich in cells while that of old people is not so abundantly supplied. This is one factor explaining the great disposition to cancer in old age. A second factor is the diminished blood supply of the tissues, epithelium growing into connective tissue tends to produce hyperaemia when the blood supply is abundant, which leads to pronounced infiltration with cells, and consequently a protection is established against the further growth of the epithelium. This protection is not sufficiently established when the blood supply is bad on account of stenosis of the vessels. A third factor in the occurrence of carcinoma is occasioned by the atrophy of the blood producing organs, the spleen, bone marrow, lymphatic glands and Pyers' patches. All these factors only make possible the unimpeded proliferation of epithelium when for a longer time in the connective tissue existed an injury from scar tissue or chronic inflammation. The latter conditions may lead to carcinoma even in early age when they affect large areas of tissue and when the formation of blood is defective.—*Zentralbl. f. Gyn.* 1913—1522.

THEODORE J. GRAMM, M. D.

Monthly Retrospect

OF HOMŒOPATHIC MATERIA MEDICA AND THERAPEUTICS

CONDUCTED BY DR. DONALD MACFARLAN
PHILADELPHIA

THE CYANIDE OF MERCURY AND DIPHTHERIA.—In recent years several eminent men of traditional affiliation have expressed their interest in the therapeutic principle of Hahnemann's law and have shown a lively interest in its furtherance. Among such the late Dr. Rosenbach was a veritable champion of homœopathy in the University of Berlin. In spite of his achievements in pathology and pharmacological research, the fact that he openly declared himself in sympathy with the new school of medicine led to quiet ostracism and indirectly to his untimely death. Von Behring, also, has honorably and vigorously brought out in his writings the logic of the homœopathic practice and Sir Almoth Wright has emphatically remarked upon the close relationship of vaccine-therapy to homœopathy. Possibly none, however, with the sole exception of Rosenbach, has taken the position of Professor Hugo Schulz, director of the Pharmacological Institute of the University of Griefswald in Germany. Both in his "Pharmakotherapie" and in his "Wirkung und Anwendung der Unorganischen Arzneistoffe" this author has laid stress on the rationality of homœopathic therapeutics in the most outspoken terms. What he terms "Organotherapie" is nothing more nor less than a modern conception of homœopathy, nor does he hesitate to say so. His most recent monograph is upon "The Treatment of Diphtheria with Cyanide of Mercury." This work of Dr. Schulz is one of the most able and scientific arguments in favor of the homœopathic practice that has been written of late by any medical man of either school of practice. The author begins with a discussion of pharmacodynamics in which he briefly explains his ideas on the place of drugs in therapeutics. He then reviews the use of the cyanide of mercury in diphtheria, giving due credit to the two homœopathic physicians, Beck and von Villers, for the introduction of this preparation in the treatment of the disease in question. Nor does he refuse to acknowledge the probable efficacy of their doses which were of the sixth centesimal dynamization. Following this, he cites no less than 554 cases collected from the literature (almost entirely from old school literature), in which the drug was used with satisfactory results both as regards a prompt recovery in mild and uncomplicated cases and as regards a low mortality in severe, advanced and complicated ones.

—*New England Medical Gazette*

MIGRAINE AND ITS TREATMENT—(Translation from the French by Dr. Leon Vannier).—Migraine is characterized by continuous or periodic headache associated with general disorders, which are quite frequently of reflex origin—gastric, hepatic, uterine, etc.—but always having a toxic basis. Numerous are the forms which may awaken the sufferings of the migrainous individual. One complains of his neck, another of his left temple, while a third may be writhing under the pangs of a right supra-orbital neuralgia which periodically seizes him every seven days. Certain ones are able to continue with their daily affairs while certain others are forced to take to their bed, away from all noise and in the most complete seclusion imaginable. With some practitioners the diagnosis “migraine” is ordinarily quickly given and their treatment is as rapidly carried out: antipyrine, pyramidon, eurythmine, etc.—the list is a long one of the analgesic products, and their effects are quite uniform as the fugacious period of apparent betterment is swiftly followed by another set-back. Let us consider the question in point: migraine varies with each patient. It constitutes as a matter of fact, a sort of *individual reaction* proper to the case in hand and it is necessary to study it, in order to realize the nature of the pains, their characters, the degree of their acuity, their seat, their irradiations, their modalities, etc., in fact all the elements which not only permit us to carefully define the form of the trouble but the determination of the remedy which is most suitable. Let us take examples: a patient comes to us and we are told of a chronic headache, which starts in after awakening, with a sensation as if small hammers were at work in the head. Great *thirst* is complained of and there are scintillating sparks before the eyes. We think of one remedy and that one remedy is *natrum muriaticum*. Another case comes along and the nature of his illness is quite different. He has been annoyed by periodical head trouble, complains of great weakness and vertigo, is unable to be up and about for any length of time and is bothered with a morning diarrhea. The case is at once clear. The man needs sulphur. But if it is necessary, in order to determine the correct homœopathic remedy of accurately recognizing the type of headache, it is just as necessary to predicate, by the aid of diagnostic technique the underlying basal cause in many instances. Every migraine whether continuous or periodic, is the expression of an intoxication. If continuous, it is either evidence of the presence in the blood of toxic substances which operate by direct action or else by provoking circulatory troubles from a distant focus. If periodic, it is the manifestation of a sort of discharge, of a brusque elimination hitting the nervous system, of toxic bodies accumulated in the organism. The nature of the intoxication is of course variable—tubercular, autogenous, specific or otherwise. Dr. Vannier then passes in review some of the homœopathic remedies he has found useful in the three distinct types of migraine dealt with.

ARSENICUM METALLICUM.—Low-spiritedness and weakness of memory. Desire to be alone—the patient is annoyed by visions which cause her to cry. Sensation of fulness in the head, as if the head were too large. Left-sided headache up to the eyes and into the ear. Headache aggravated when stooping and when lying down. Oedematous swelling of the forehead and face with itching, which can only be allayed by pinching. The face is red.

itching, burning and bloated. Eyes swelled and watery (with coryza). Eyes burn with coryza. The eyes are weak—day and gas-light are very unpleasant.—*Manuscripts of Adolphus von Lippe.*

CASCARILLA.—Heat, with thirst for warm drinks. Gnawing, pressing pains. Pain in the stomach as from a shock. Pressing colic. Stools difficult and hard. Discharge of blood from the rectum.—*Manuscripts of Adolphus von Lippe.*

CASTOREUM.—Predominant chilliness. Restless sleep with frightful dreams and starting. Attacks of chilliness with ice-coldness in the back.—*Manuscripts of Adolphus von Lippe.*

ORGANON.—The great homœopathic Law of Cure rests on this law of man's nature, revealed by experience, that diseases are only destroyed and cured by similar diseases. The homœopathic law may be thus formulated: *that a disease can only be destroyed and cured by a remedy which has the tendency to produce a similar disease, for the effects of drugs are in themselves no other than artificial diseases.*—*Late translation in The Everyman Library. Charles E. Wheeler of London.*

ORGANON.—If now the counter-disease force is entirely suitable by its likeness of symptoms, and if, further, it is administered properly, then the natural disease, however threatening or severe, however encumbered with many symptoms, will depart almost unnoticed in a few hours, provided it has not been of long duration. If it is of longer standing, it will be a few days before it disappears. In either case practically none of the pathogenic symptoms of the drug, that is, of the artificial counter-disease will be observed. In rapid and hardly noticeable sequence, there comes only health; the natural and the artificial disease both swiftly and gently vanish, without perceptible reaction; there has been a true dynamic annihilation.—*Late translation in The Everyman Library. Charles E. Wheeler of London.*

PREFACE ON DOCTORS.—But now please observe how “the whirligig of time brings its revenges.” This latest discovery of the remedial virtues of a very, very tiny hair of the dog that bit you reminds us, not only of Arndt's law of protoplasmic reaction to stimuli, according to which weak and strong stimuli provoke opposite reactions, but of Hahnemann's homœopathy, which was founded on the fact alleged by Hahnemann that drugs which produce certain symptoms when taken in ordinary perceptible quantities, will, when taken in infinitesimally small quantities, provoke just the opposite symptoms; so that the drug that gives you a headache will also cure a headache if you take little enough of it. I have already explained that the savage opposition which homœopathy encountered from the medical profession was not a scientific opposition; for nobody seems to deny that some drugs act in the alleged manner. It was opposed simply because doctors and apothecaries lived by selling bottles and boxes of doctor's stuff to be taken in spoonfuls or in pellets as large as peas; and people would not pay as much for drops and globules no bigger than pins' heads. Nowadays, however, the more cultivated folk are beginning to be suspicious of drugs, and the incorrigibly superstitious people so profusely supplied with

patent medicines (the medical advice to take them being wrapped around the bottle and thrown in for nothing) that homœopathy has become a way of rehabilitating the trade of prescription compounding, and is consequently coming into professional credit. At which point the theory of opsonins comes very opportunely to shake hands with it.

Add to the newly triumphant homœopathist and the opsonist that other remarkable innovator, the Swedish masseur, who does not theorize about you, but probes you all over with his powerful thumbs until he finds out your sore spots and rubs them away, besides cheating you into a little wholesome exercise; and you have nearly everything in medical practice to-day that is not flat witchcraft or pure commercial exploitation of human credulity and fear of death. Add to them a good deal of vegetarian and teetotal controversy raging round a clamor for scientific eating and drinking, and resulting in little so far except calling digestion metabolism and dividing the public between the eminent doctor who tells us that we do not eat enough fish, and his equally eminent colleague who warns us that a fish diet must end in leprosy, and you have all that opposes with any sort of countenance the rise of Christian Science with its cathedrals and congregations and zealots and miracles and cures: all very silly, no doubt, but sane and sensible, poetic and hopeful, compared to the pseudo science of the commercial general practitioner, who foolishly clamors for the prosecution and even the execution of the Christian Scientists when their patients die, forgetting the long death roll of his own patients.—*George Bernard Shaw.*

WEST JERSEY HOMOEOPATHIC HOSPITAL.—This magnificent building was recently opened to receive patients. It is probably one of the best equipped institutions of its size in the United States to-day. Its appraised valuation is \$250,000, a large contribution being received by Mr. Reynolds, of Camden. The ventilating plant is truly remarkable, the air in the general building being completely changed every eight minutes, while the air is changed in the operating room every three minutes. One of the most attractive features is to be the sunken garden which is being laid at present. At its very fullest capacity the hospital will furnish two hundred beds. The site of the building is excellent as it is high and commanding.

VERBASCUM THAPSUS.—Stinging pain in the limbs and neuralgic pain in the left ankle. The pains are generally accompanied by a benumbing sensation. The symptoms are caused and aggravated by a change of temperature, especially when entering from the open air into the room and vice versa. Very violent diarrhea with griping. A great deal of belly pain as if pierced with a lance. Cramps around the navel; seems as if the pain was caused by the bowels becoming twisted. General lassitude and sleepiness in the morning after rising. Tearing from above downwards. One-sided shudderings. Face-ache aggravated by change of temperature and pressure. Burning urination with frequency. Increase of urine with pressure in the bladder. Severe soreness in the pharynx, felt in swallowing and cough during sleep especially in children. Sensation of heat in the epigastrium as if from dyspepsia. Great stiffness in left ankle joint and more or less soreness and stiffness in the joints of the lower extremities.—*A. von Lippe and Others.*

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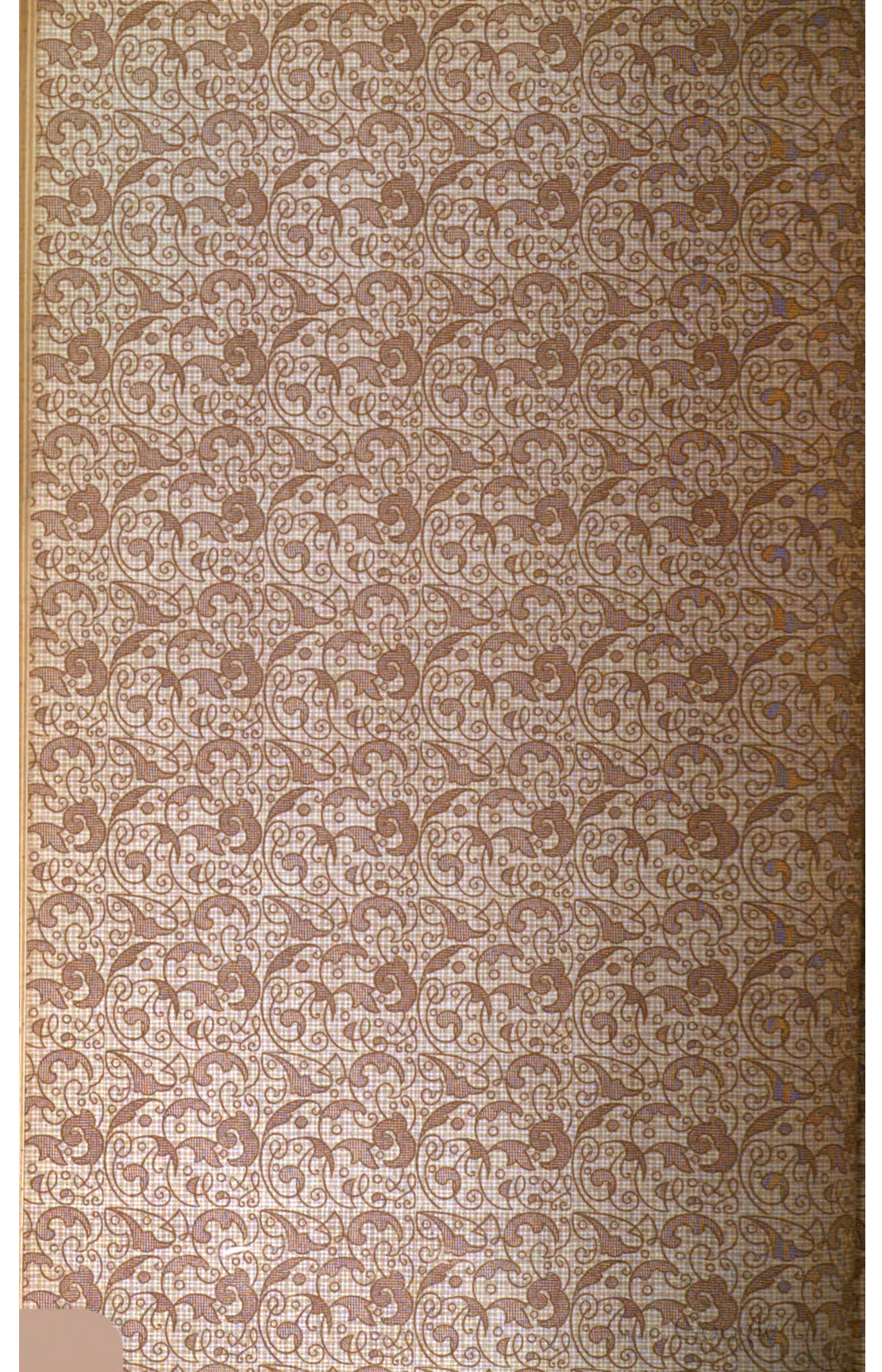
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